センターファイル
CENTER FILE

SERVICE DATA
FILE NO. 830-026

金
53.[illegible]10
沢

TOSHIBA

STEREO RADIO CASSETTE RECORDER

RT-8490S

SPECIFICATIONS

RADIO SECTION	
Frequency Range	FM: 88 — 108 MHz SW1: 2.3 — 7.3 MHz SW2: 7.3 — 22 MHz MW: 515 — 1630 kHz
Antenna	FM, SW2, SW1 Telescopic rod antennas MW Built-in ferrite bar antenna
TAPE RECORDER AND GENERAL SECTION	
Track System	4-track, 2-channel stereo or monaural
Recording System	AC-bias, AC-erase
Head	Hard permalloy head
TAPE	PHILIPS compact cassette tape
Frequency Response	60 — 10,000 Hz
Wow and Flutter	No more than 0.15% (WRMS)
Signal to Noise Ratio	46 dB
Built-in Microphone	Electret condenser microphone x 2
Semiconductor	3 ICs, 25 transistors, 32 diodes and 2 LED
Monitor System	Variable monitor system
Speakers	12 cm woofer x 2, 5 cm tweeter x 2
Output Power	4W x 2 (10% THD)
Input	EXT MIC jacks REMOTE jack LINE OUT jacks AUX IN jacks
Output	EXT SP jacks PHONES: for headphone 4 — 16Ω
Power Source	DC 12 V ("D" size battery x 8) EXT DC 12 V for car battery operation (require car adaptor cord with center minus plug to unit side) AC 115/230 V 50/60 Hz
Power Consumption (AC)	20 W
Dimensions (WxHxD)	504 x 194 x 323 mm (19-27/32 x 7-11/18 x 12-23/32 in.)
Weight (without batteries)	5.1 Kg (11.3 Lbs.)
Accessories Supplied	AC power cord Demonstration Cassette tape (C-7)

Specifications subject to change without notice.

VF

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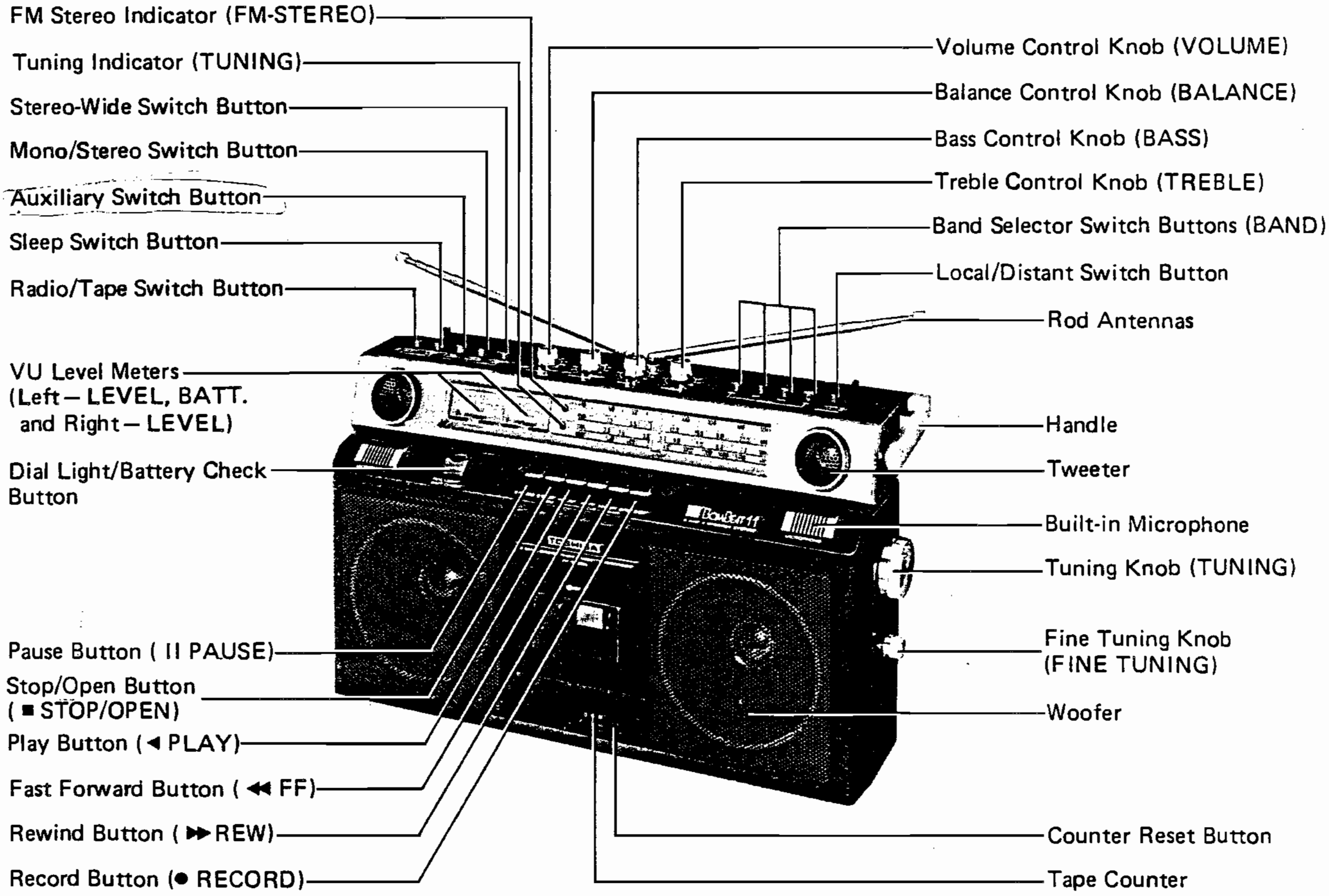
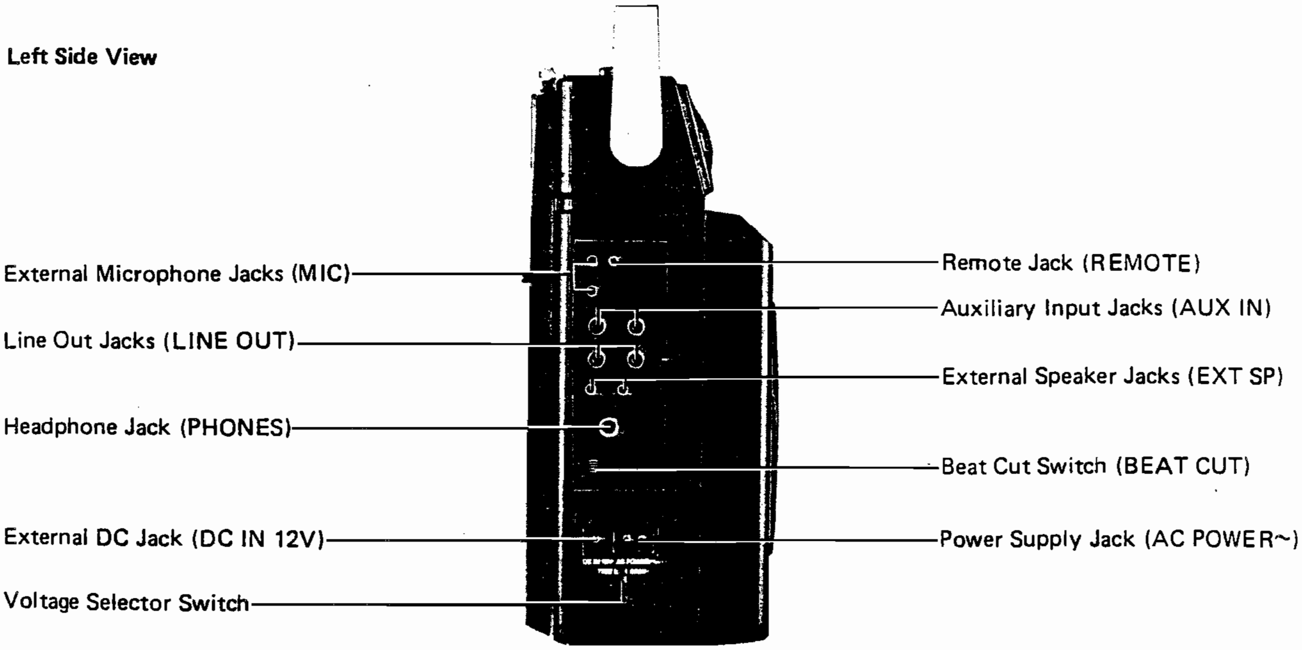
OPERATING CONTROLS

Front View


FM Stereo Indicator (FM-STEREO)
Tuning Indicator (TUNING)
Stereo-Wide Switch Button
Mono/Stereo Switch Button
Auxiliary Switch Button
Sleep Switch Button
Radio/Tape Switch Button
VU Level Meters (Left – LEVEL, BATT. and Right – LEVEL)
Dial Light/Battery Check Button
Pause Button (II PAUSE)
Stop/Open Button (■ STOP/OPEN)
Play Button (◀ PLAY)
Fast Forward Button (◀◀ FF)
Rewind Button (▶▶REW)
Record Button (● RECORD)
Volume Control Knob (VOLUME)
Balance Control Knob (BALANCE)
Bass Control Knob (BASS)
Treble Control Knob (TREBLE)
Band Selector Switch Buttons (BAND)
Local/Distant Switch Button
Rod Antennas
Handle
Tweeter
Built-in Microphone
Tuning Knob (TUNING)
Fine Tuning Knob (FINE TUNING)
Woofer
Counter Reset Button
Tape Counter

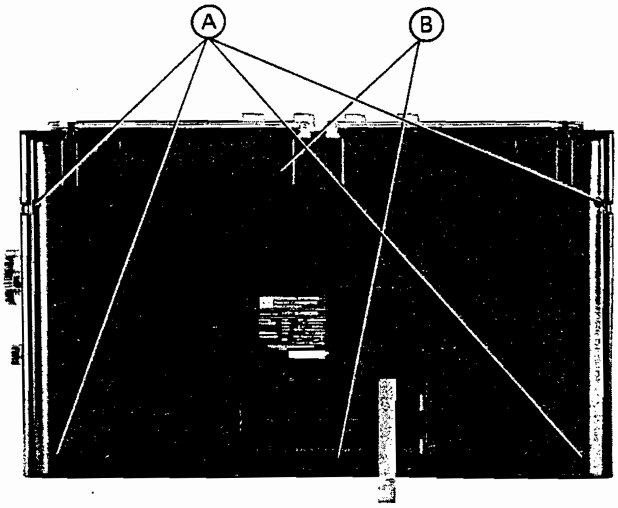
Left Side View


External Microphone Jacks (MIC)
Line Out Jacks (LINE OUT)
Headphone Jack (PHONES)
External DC Jack (DC IN 12V)
Voltage Selector Switch
Remote Jack (REMOTE)
Auxiliary Input Jacks (AUX IN)
External Speaker Jacks (EXT SP)
Beat Cut Switch (BEAT CUT)
Power Supply Jack (AC POWER~)

DISASSEMBLY INSTRUCTIONS

BACK CABINET REMOVAL

1. Remove 4 screws Ⓐ.
2. Remove battery compartment cover and remove 2 screws Ⓑ.
3. Disconnect the lead wire of the telescopic rod antenna from the tuner P.C.B. and 2 lead wires from the power P.C.B.
4. Separate the back cabinet from the front cabinet.

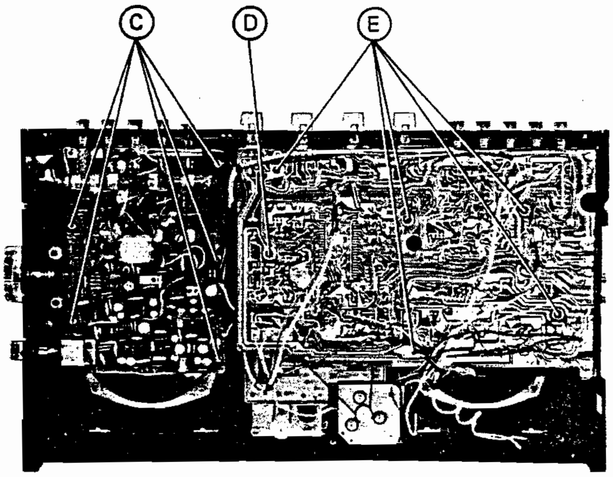


TUNER P.C.B. REMOVAL

1. Remove the tuning and fine tuning knobs.
2. Remove 5 screws Ⓒ.
3. Separate the tuner P.C.B. from the cabinet frame.

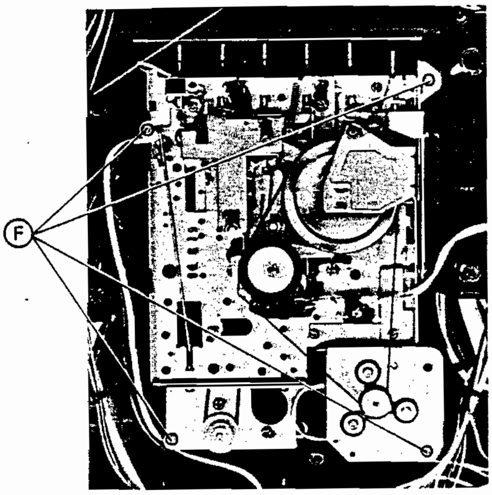
AUDIO P.C.B. REMOVAL

1. Remove the volume, balance, bass and treble control knobs.
2. Remove screw with washer Ⓓ and 5 screws Ⓔ (one with cord clamp).
3. Separate the audio P.C.B. from the cabinet frame.



MECHANISM ASSEMBLY REMOVAL

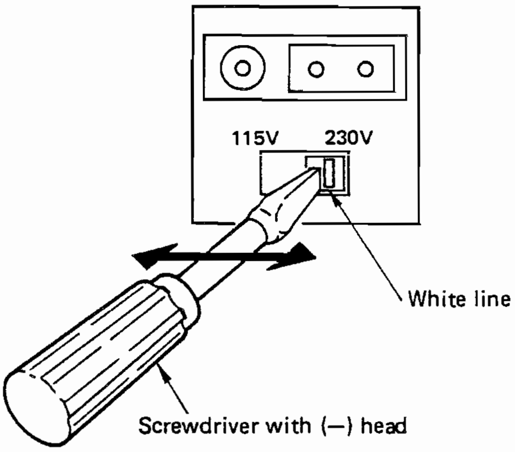
1. Detach the cassette holder from the front cabinet.
2. Remove 4 screws Ⓕ.
3. Separate the mechanism assembly from the cabinet frame by means of releasing the edge from the hook holding the mechanism assembly.



SERVICE NOTES

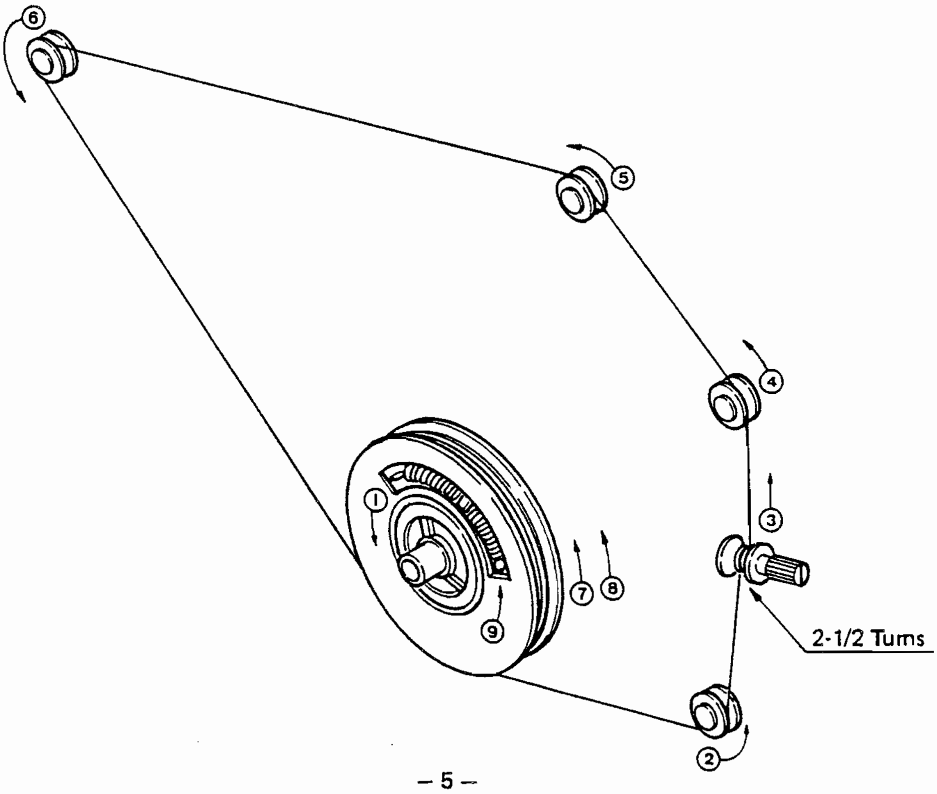
CAUTION FOR VOLTAGE SELECTOR

- This unit operates on AC 115 or 230 V home current.
- Before plugging the power supply cord into an AC outlet or prior to changing over the voltage selector switch, confirm local voltage of the current to which this unit is to be connected. Should it be inadvertently connected to the wrong voltage, trouble may result.
- Manipulate the voltage selector switch provided at the cabinet left side to comply with the local AC voltage.



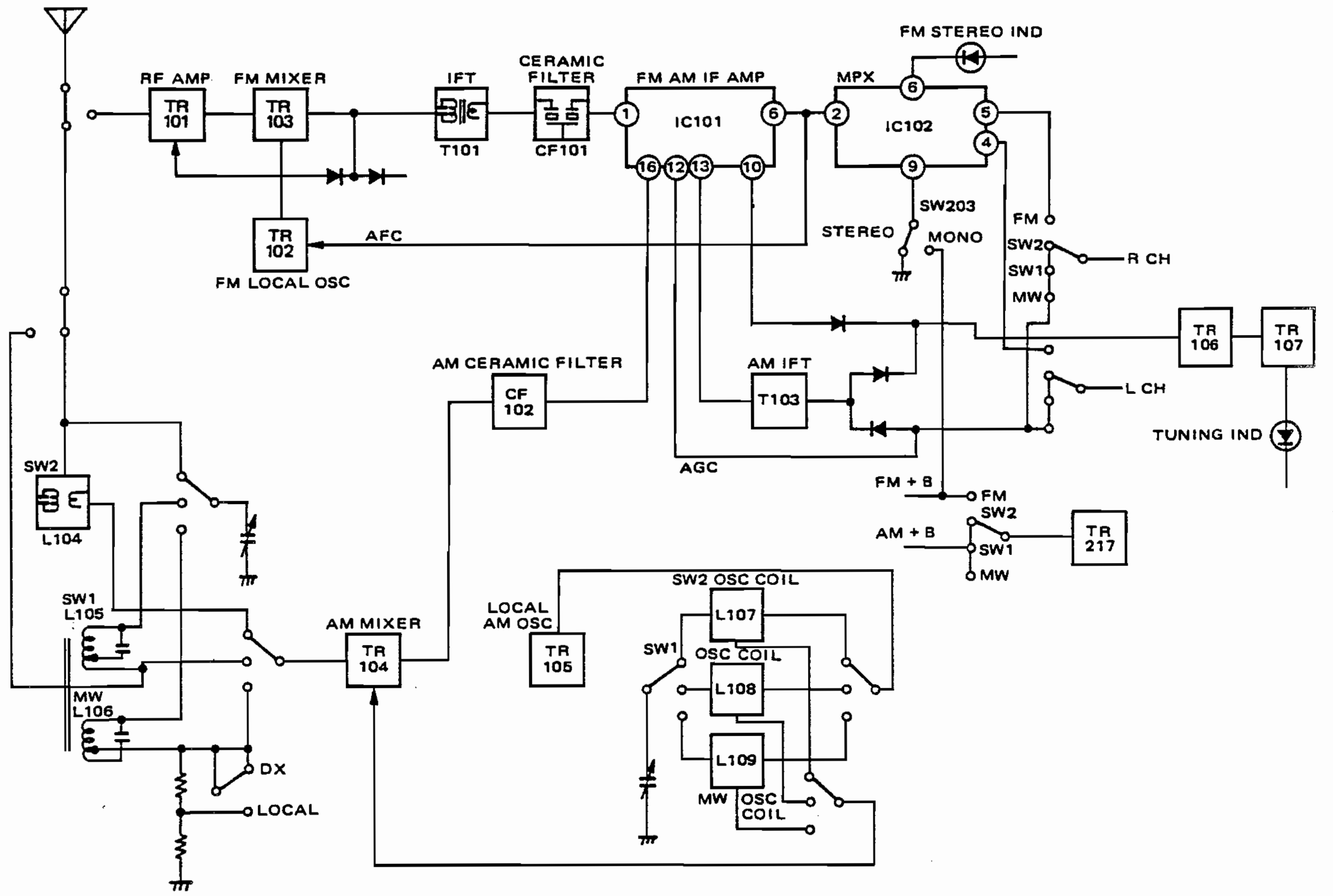
DIAL CORD STRINGING

1. Turn the tuning knob fully counterclockwise and set the tuning to low end.
2. Rotate the dial drum B on the tuner P.C.B. fully counterclockwise.
3. Set the dial pointer to the "0" point on the tuning dial.

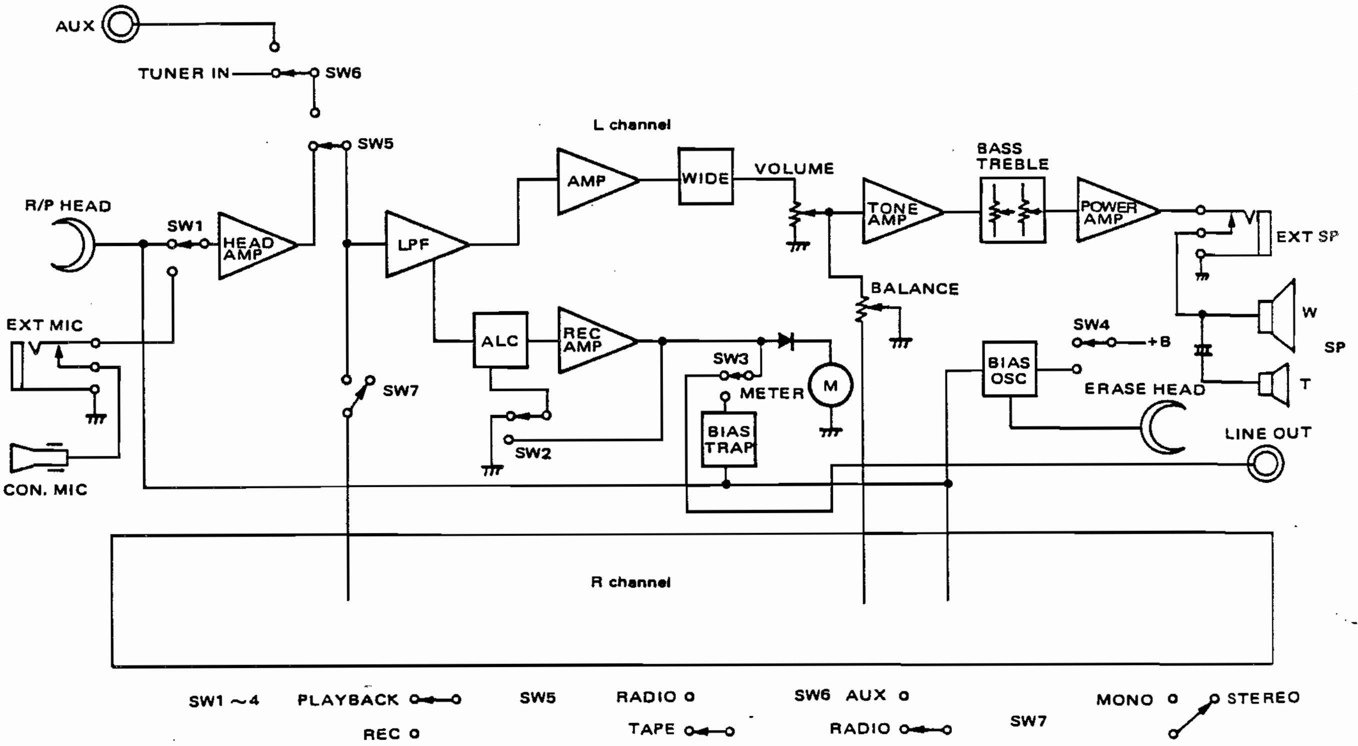


BLOCK DIAGRAM

TUNER BLOCK


RF AMP
TR 101
FM MIXER
TR 103
IFT
T101
CERAMIC FILTER
CF101
FM AM IF AMP
IC101
1
6
16
12
13
10
MPX
IC102
2
6
5
4
9
FM STEREO IND
TR 102
FM LOCAL OSC
AFC
SW203
STEREO
MONO
FM
SW2
SW1
MW
R CH
L CH
TR 106
TR 107
TUNING IND
AM CERAMIC FILTER
CF 102
AM IFT
T103
AGC
FM + B
FM
SW2
AM + B
SW1
MW
TR 217
SW2
L104
SW1
L105
MW
L106
DX
LOCAL
AM MIXER
TR 104
LOCAL AM OSC
TR 105
SW2 OSC COIL
L107
SW1
OSC COIL
L108
L109
MW
OSC COIL

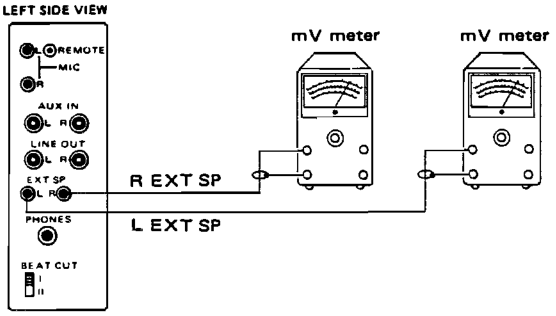
AUDIO BLOCK

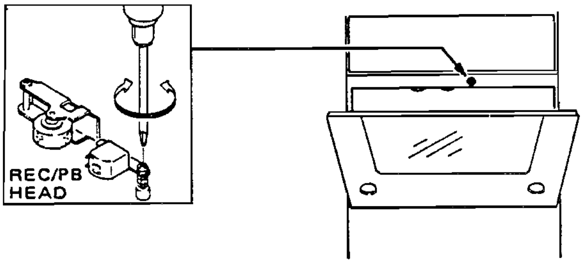

AUX
TUNER IN
SW6
SW5
R/P HEAD
SW1
HEAD AMP
EXT MIC
CON. MIC
SW7
LPF
L channel
AMP
WIDE
VOLUME
TONE AMP
BASS
TREBLE
POWER AMP
EXT SP
W
SP
T
BALANCE
ALC
REC AMP
SW2
SW3
METER
M
BIAS TRAP
SW4
+B
BIAS OSC
ERASE HEAD
LINE OUT
R channel
SW1 ~ 4
PLAYBACK
REC
SW5
RADIO
TAPE
SW6
AUX
RADIO
SW7
MONO
STEREO

ALIGNMENT INSTRUCTIONS

1. HEAD AZIMUTH ADJUSTMENT

1-1 Test Equipment Connections


LEFT SIDE VIEW
L
REMOTE
MIC
R
AUX IN
L R
LINE OUT
L R
EXT SP
L R
PHONES
BEAT CUT
I
II
R EXT SP
L EXT SP
mV meter
mV meter



1-2 Setting

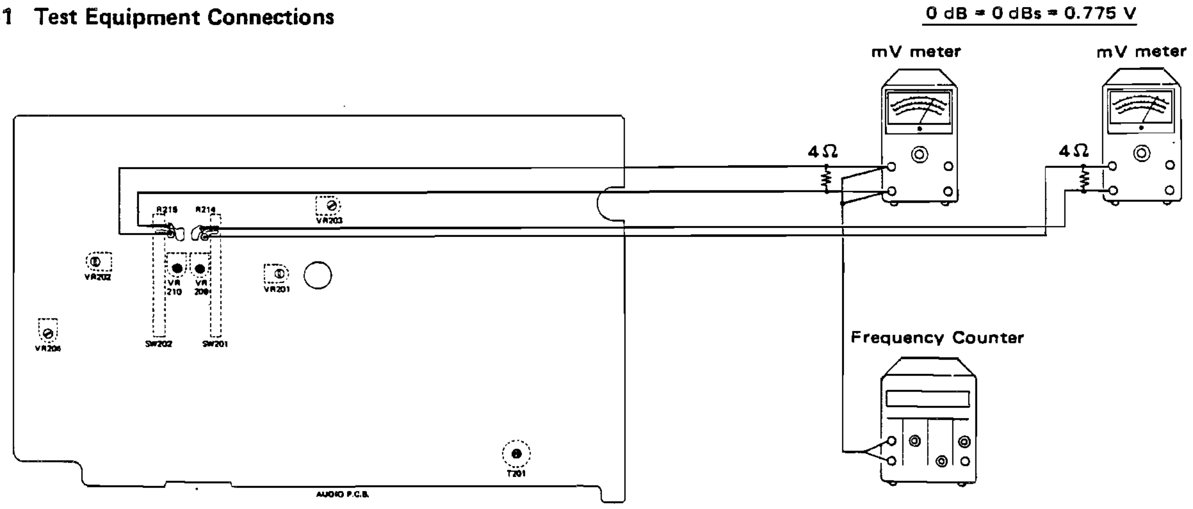
FUNCTION Button	TAPE
MODE Button	STEREO
BALANCE Knob	CENTER

1-3 Adjustment

1. Detach cassette holder. Insert the Test Tape (MTT-114, 10 kHz) and set the unit to playback mode. Adjust azimuth screw with a screwdriver through the hole.
2. Turn the screw so that both L and R channel show maximum on mV meter.
3. See to it that meter read about the same on reversed side of the tape.
4. If much difference between 2 and 3 observed, readjust to balance it.
5. After the adjustment apply screw lock.

2. RECORDING BIAS ADJUSTMENT

2-1 Test Equipment Connections


0 dB = 0 dBs = 0.775 V
mV meter
mV meter
4Ω
4Ω
R215
R214
VR203
VR202
VR210
VR209
VR201
VR206
SW202
SW201
T201
AUDIO P.C.B.
Frequency Counter

2-2 Setting

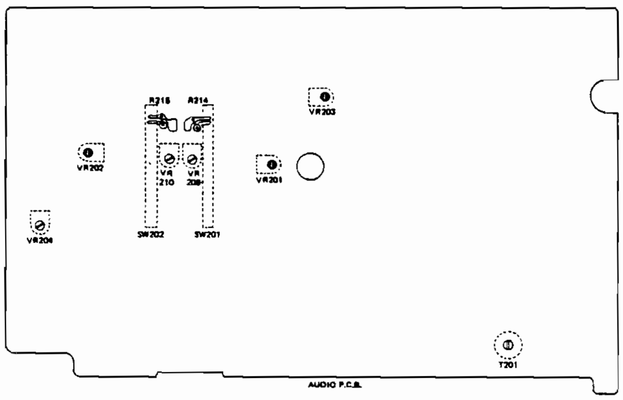
FUNCTION Button	TAPE
BEAT CUT Switch	I

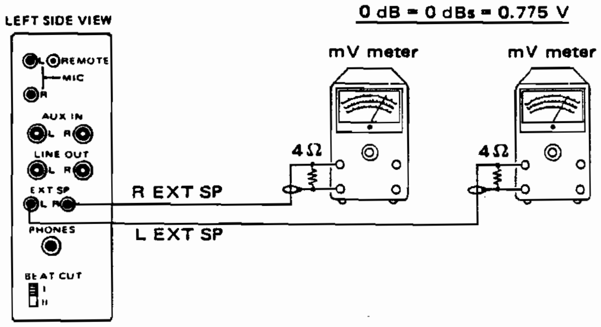
2-3 Adjustment

1. Adjust VR209 and VR210 so that meter reads 4.5 mV +1 dB on record mode.
2. Adjust core of T201 so that frequency counter reads 61.7 kHz ±1 kHz.
3. Repeat (1) and (2) to get best performance.

3. PLAYBACK EQUALIZATION and BALANCING of L and R-ch OUTPUT ADJUSTMENT

3-1 Test Equipment Connections


R215
R214
VR203
VR202
VR210
VR209
VR201
VR204
SW202
SW201
T201
AUDIO P.C.B.


LEFT SIDE VIEW
0 dB = 0 dBs = 0.775 V
mV meter
mV meter
REMOTE
MIC
L
R
AUX IN
LINE OUT
EXT SP
PHONES
BEAT CUT
I
II
4Ω
4Ω
R EXT SP
L EXT SP

3-2 Setting

FUNCTION Button . . . . TAPE
MODE Button . . . . STEREO
BALANCE Knob . . . . CENTER
BASS, TREBLE Knobs . . . . MAX

3-3 Adjustment (Playback Equalization)

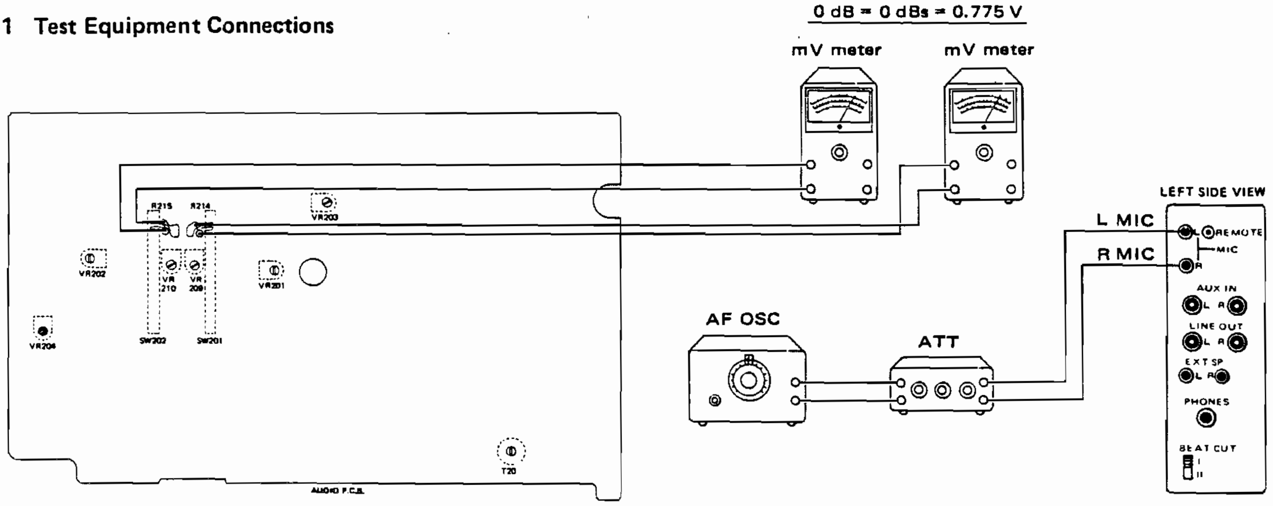
1. Insert the Test Tape (MTT-115B, 333 Hz and 8 kHz) and set the unit to playback mode.
2. Apply 333 Hz and adjust volume to 0 dB. And adjust BALANCE so that L and R ch show the same output.
3. Then, apply 8 kHz and adjust VR201 and VR202 to 0 dB output.

3-4 Adjustment (Balancing of L and R-ch Output)

1. Insert the Test Tape (MTT-150, 400 Hz) and set the unit to playback mode.
2. Adjust VOLUME control so that mV meter indicates 0 dB.
3. Adjust VR203 to balance L and R-ch output.

4. ALC ADJUSTMENT

4-1 Test Equipment Connections


0 dB = 0 dBs = 0.775 V
mV meter
mV meter
R215
R214
VR203
VR202
VR210
VR209
VR201
VR204
SW202
SW201
T201
AUDIO P.C.B.
LEFT SIDE VIEW
L MIC
R MIC
REMOTE
MIC
AUX IN
LINE OUT
EXT SP
PHONES
BEAT CUT
AF OSC
ATT

4-2 Setting

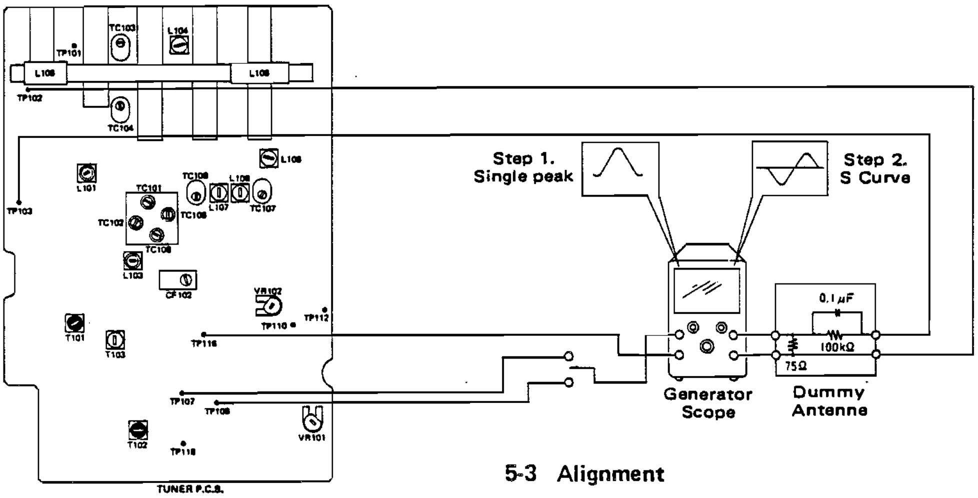
FUNCTION Button . . . . TAPE
MODE Button . . . . STEREO

4-3 Adjustment

1. Set the unit to record mode, and apply a signal, 333 Hz – 52 dB via L and R EXT MIC.
2. Adjust VR204 so that the mV meter swings about the same on L and R-ch.

5. FM IF ADJUSTMENT

5-1 Test Equipment Connections


TC103
L104
TP101
L105
L105
TP102
TC104
L108
L101
TC101
TC105
L106
TP103
TC102
L107
TC107
TC106
TC108
L103
CF102
VR102
TP112
TP110
T101
T103
TP116
TP107
TP108
VR101
T102
TP118
TUNER P.C.B.
Step 1.
Single peak
Step 2.
S Curve
0.1 μF
100kΩ
75Ω
Generator
Scope
Dummy
Antenna

5-2 Setting

Generator scope

Sweep center frequency . . . . 10.7 MHz
Input gain . . . . 0.3 Vp-p/cm
Marker . . . . OFF or minimum

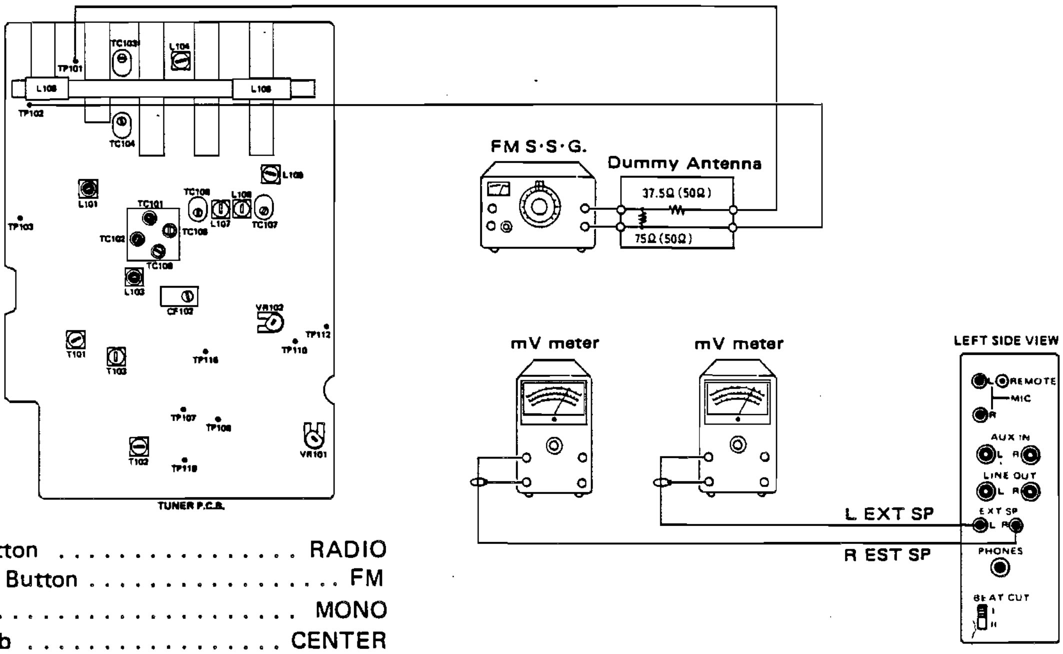
FUNCTION Button . . . . RADIO
BAND SELECTOR Button . . . . FM

5-3 Alignment

1. Apply 70 dB (μV) and adjust T101 to maximum single peak.
2. Adjust T102 to symmetric S curve and best linearity.

6. FM TRACKING ADJUSTMENT

6-1 Test Equipment Connections


TC103
L104
TP101
L105
L105
TP102
TC104
L108
L101
TC101
TC105
L106
TP103
TC102
L107
TC107
TC106
TC108
L103
CF102
VR102
TP112
TP110
T101
T103
TP116
TP107
TP108
VR101
T102
TP118
TUNER P.C.B.
FM S·S·G.
Dummy Antenna
37.5Ω (50Ω)
75Ω (50Ω)
mV meter
mV meter
LEFT SIDE VIEW
L
REMOTE
MIC
R
AUX IN
L R
LINE OUT
L R
EXT SP
L R
PHONES
BEAT CUT
I
II
L EXT SP
R EST SP

6-2 Setting

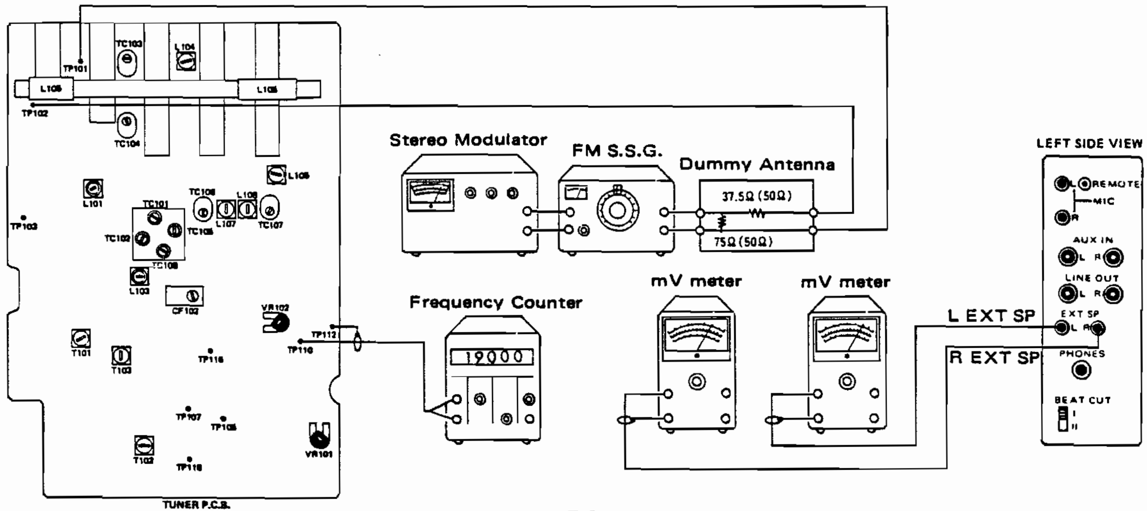
FUNCTION Button . . . . RADIO
BAND SELECT Button . . . . FM
MODE Button . . . . MONO
BALANCE Knob . . . . CENTER
VOLUME Knob . . . . OPTIONAL
BASS, TREBLE Knob . . . . MAX

6-3 Alignment

FM SSG frequency	Set tuning to	Adjust	Description
1. 87.25 MHz (400 Hz, 75 kHz deviation) output, 20 ~ 60 dB (μV)	Maximum (turn the tuning knob counterclockwise)	L103	87.25 MHz can be received
2. 109 MHz (400 Hz, 75 kHz deviation) output, 20 ~ 60 dB (μV)	Minimum (turn the tuning knob clockwise)	TC102	109 MHz can be received
3. Repeat (1) and (2) alternately and adjust so that 87.25 ~ 109 MHz are received.			
4. 90 MHz (400 Hz, 75 kHz deviation) output, 10 ~ 30 dB (μV)	Tuned to 90 MHz	L101	Maximum gain
5. 106 MHz (400 Hz, 75 kHz deviation) output, 10 ~ 30 dB (μV)	Tuned to 106 MHz	TC101	Maximum gain
6. Repeat (4) and (5) alternately and adjust until tracking error disappears.			

7. FM MPX ADJUSTMENT

7-1 Test Equipment Connections


TP101
TC103
L104
TP102
TC104
L101
TC101
TC106
L107
TC107
TP103
TC102
L103
CF102
VR102
TP112
TP110
T101
T103
TP116
TP107
T102
VR101
TUNER P.C.B.
Stereo Modulator
FM S.S.G.
Dummy Antenna
37.5Ω (50Ω)
75Ω (50Ω)
Frequency Counter
19000
mV meter
mV meter
LEFT SIDE VIEW
L
REMOTE
MIC
R
AUX IN
L R
LINE OUT
L R
EXT SP
L R
L EXT SP
R EXT SP
PHONES
BEAT CUT
I
II

7-2 Setting

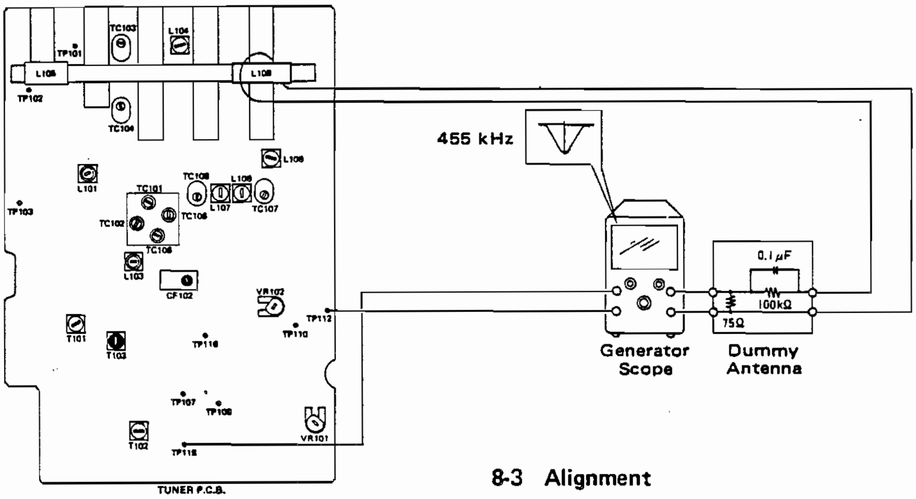
Stereo modulator	
Modulation frequency	1 kHz
Modulation rate	100%
Pilot	7.5 kHz
Main	67.5 kHz
FUNCTION Button	RADIO
BAND SELECTOR Button	FM
MODE Button	STEREO

7-3 Alignment

1. Apply 98 MHz, 30 dB (μV) signal, and tune the unit to it.
   Note: The tuning is easier on MONO position.
2. Rise FM SSG output to 60 dB (μV) and turn modulation off.
3. Adjust VR102 so that frequency counter indicates 19 kHz ±20 Hz.
4. Turn on modulation and apply it to L or R-ch, and adjust VR101 to get best separation (mV meter indicates more than −20 dB).
5. If frequency counter is not available, go to page 2, and modulate L or R ch, and then turn VR102 until stereo indicator lights. Further turn dims the light. Set VR102 to center of this range.

8. AM IF ADJUSTMENT

8-1 Test Equipment Connections


TC103
L104
TP101
L105
L108
TP102
TC104
L109
L101
TC101
TC105
L106
TP103
TC102
TC108
L107
TC107
TC106
L103
CF102
VR102
TP112
TP110
T101
T103
TP116
TP107
TP108
T102
TP118
VR101
TUNER P.C.B.
455 kHz
0.1 μF
100kΩ
75Ω
Generator Scope
Dummy Antenna

8-2 Setting

Generator scope
Sweep frequency center . . . . 455 kHz
Input gain . . . . 0.3 Vp-p/cm

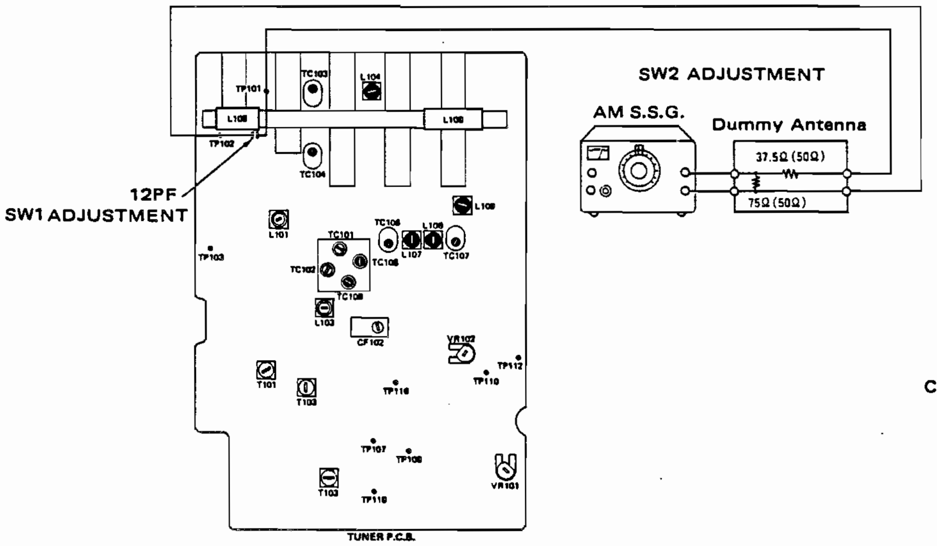
FUNCTION Button . . . . RADIO
BAND SELECTOR Button . . . . AM

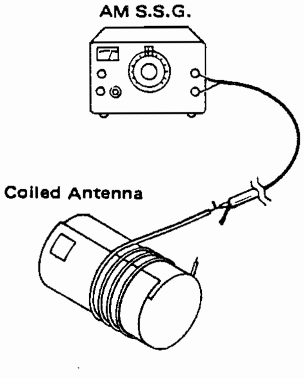
8-3 Alignment

1. Apply minimum output necessary and see to it that the scope shows U curve. And adjust T103 and CF102 for best deflection and symmetry.

9. AM TRACKING ADJUSTMENT

9-1 Test Equipment Connections


SW2 ADJUSTMENT
AM S.S.G.
Dummy Antenna
37.5Ω (50Ω)
75Ω (50Ω)
12PF
SW1 ADJUSTMENT
TC103
L104
TP101
L105
L108
TP102
TC104
L109
L101
TC101
TC105
L106
TP103
TC102
L107
TC107
TC106
L103
CF102
VR102
TP112
TP110
T101
T103
TP116
TP107
TP108
T102
TP118
VR101
TUNER P.C.B.


AM S.S.G.
Coiled Antenna

MW SW1 ADJUSTMENT

9-2 Setting

FUNCTION Button . . . . RADIO
BAND SELECTOR Button . . . . . MW, SW1 or SW2
BALANCE Knob . . . . CENTER

9-3 MW Alignment

AM SSG frequency	Set tuning to	Adjust	Description
1. 510 kHz (400 Hz, 30% modulation) output, 60 ~ 100 dB	Maximum (turn the tuning knob counterclockwise)	L109	510 kHz can be received
2. 1,650 kHz (400 Hz, 30% modulation) output, 60 ~ 100 dB	Minimum (turn the tuning knob clockwise)	TC108	1,650 kHz can be received
3. Repeat (1) and (2) alternately and adjust so that 520 ~ 1,650 kHz are received.			
4. 600 kHz (400 Hz, 30% modulation) output, 40 ~ 50 dB/m	Tuned to 600 kHz	L106 (bar antenna coil)	Output is maximum
5. 1,400 kHz (400 Hz, 30% modulation) output, 40 ~ 50 dB/m	Tuned to 1,400 kHz	TC105	Output is maximum
6. Repeat (4) and (5) alternately and confirm that they are as specified.			

Note: After adjusting L106 (bar antenna coil), melt electro wax with soldering iron and fix it in position.

9-4 SW1 Alignment

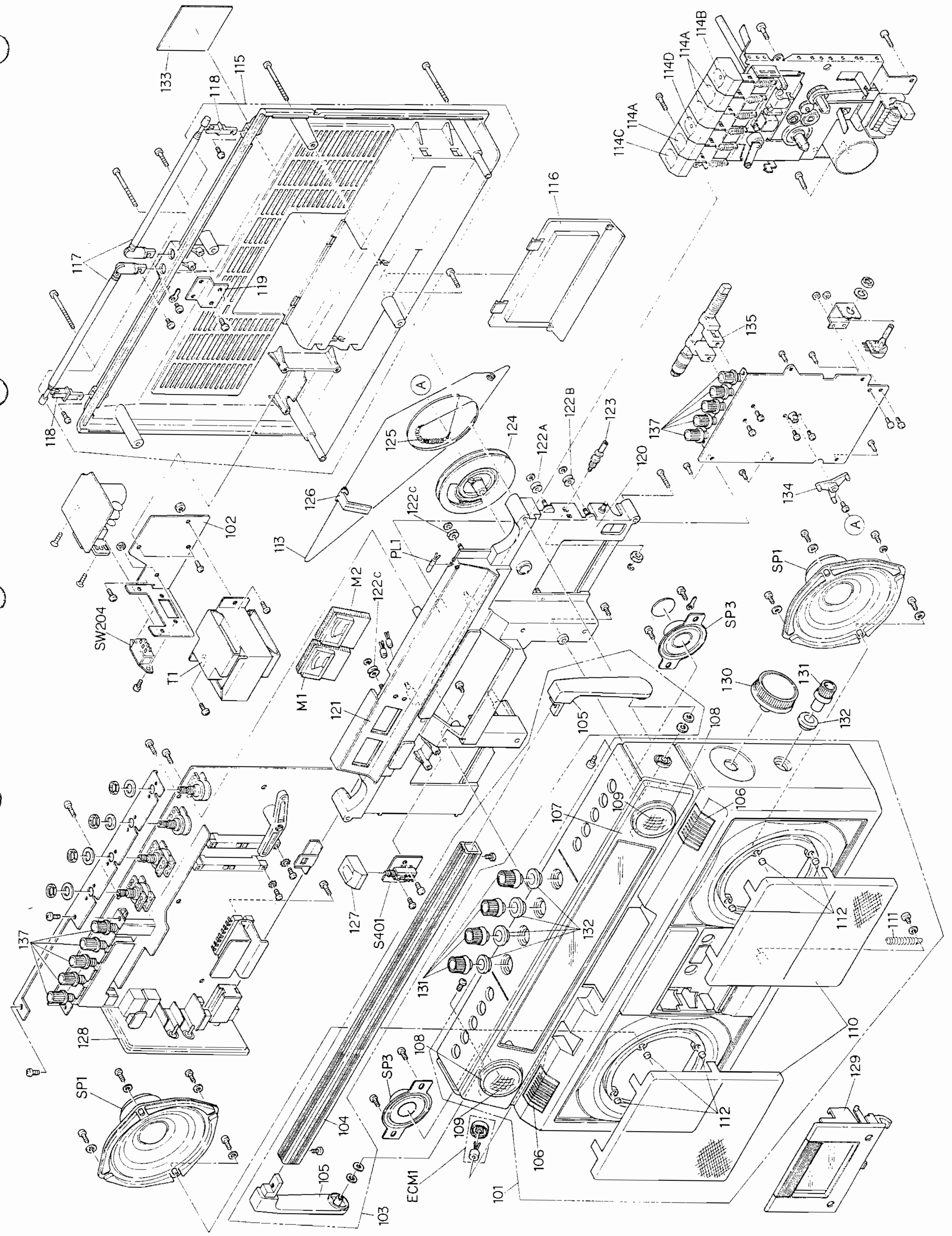
AM SSG frequency	Set tuning to	Adjust	Description
1. 2.25 MHz (400 Hz, 30% modulation)	Maximum (turn the tuning knob counterclockwise)	L108	2.25 MHz can be received
2. 7.5 MHz (400 Hz, 30% modulation)	Minimum (turn the tuning knob clockwise)	TC107	7.5 MHz can be received
3. Repeat (1) and (2) alternately and adjust so that 2.2 ~ 7.2 MHz are received.			
4. 2.5 MHz (400 Hz, 30% modulation)	Tuned to 2.5 MHz	L105 (bar antenna coil)	Maximum gain
5. 6 MHz (400 Hz, 30% modulation)	Tuned to 6 MHz	TC104	Maximum gain
6. Repeat (4) and (5) alternately and confirm that they are as specified.			

Note: Before adjustment, connect a 12PF capacitor across the TP101 (rod antenna lead connecting terminal) and the TP102 as in "9-1 Test Equipment Connections" on page 11. After adjusting L105 (bar antenna coil), melt wax with soldering iron and fix it in position.

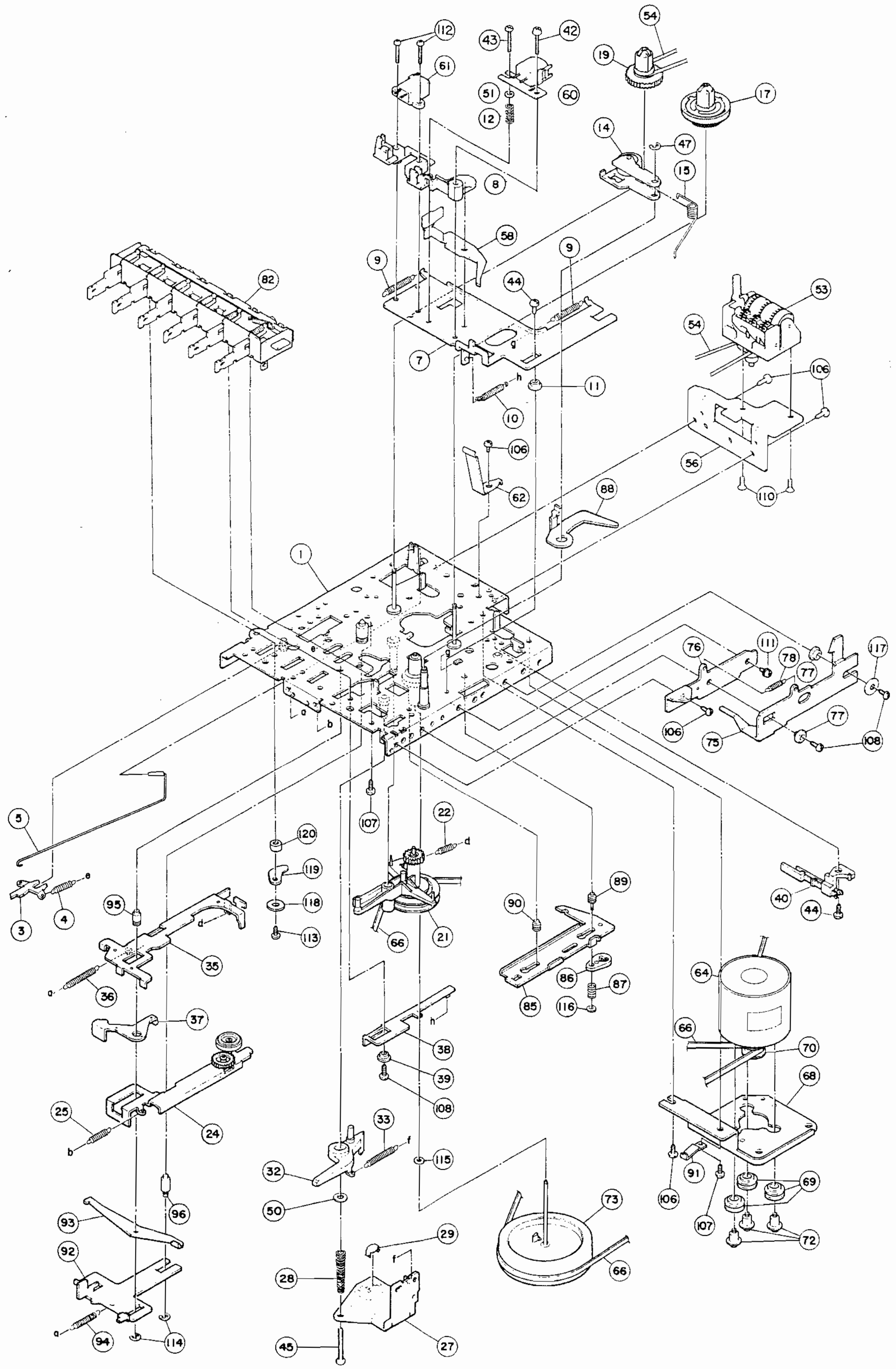
9-5 SW2 Alignment

AM SSG frequency	Set tuning to	Adjust	Description
1. 7.1 MHz (400 Hz, 30% modulation)	Maximum (turn the tuning knob counterclockwise)	L107	7.1 MHz can be received
2. 22.6 MHz (400 Hz, 30% modulation)	Minimum (turn the tuning knob clockwise)	TC106	22.6 MHz can be received
3. Repeat (1) and (2) alternately and adjust so that 6.8 ~ 18.5 MHz are received.			
4. 8 MHz (400 Hz, 30% modulation)	Tuned to 7 MHz	L104	Maximum gain
5. 27 MHz (400 Hz, 30% modulation)	Tuned to 17 MHz	TC103	Maximum gain
6. Repeat (4) and (5) alternately and confirm that they are as specified.			

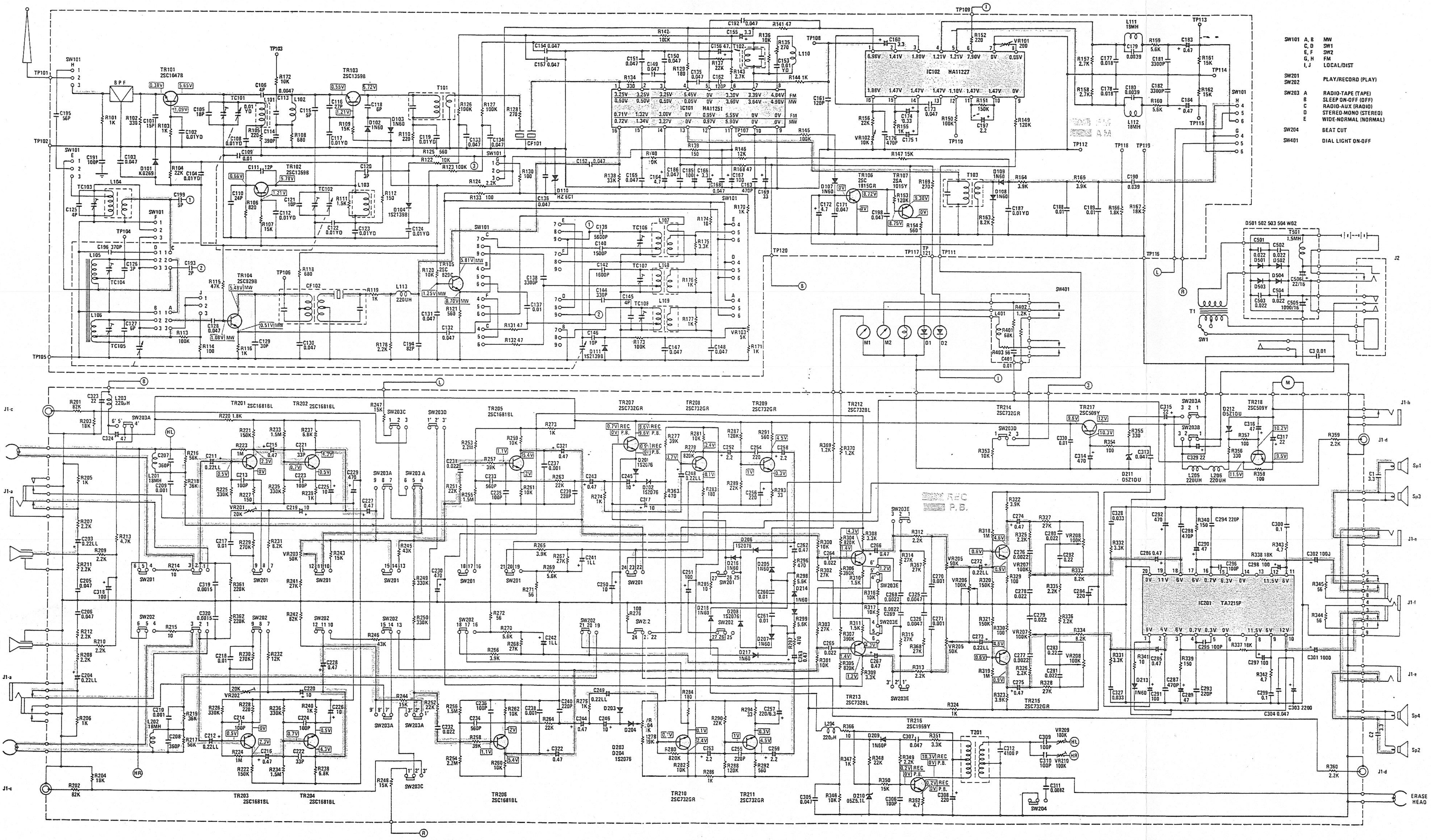
CABINET EXPLODED VIEW


133
115
118
114B
114A
114D
114C
114A
116
117
119
118
125
A
124
122B
123
122A
135
137
120
126
122C
102
113
PL1
M2
122C
SW204
T1
M1
121
134
A
SP1
SP3
105
130
131
132
108
106
107
109
127
S401
112
111
131
132
137
128
110
129
SP1
SP3
108
104
109
ECM1
106
101
105
103
112

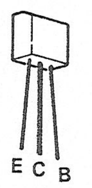
MECHANISM EXPLODED VIEW


112
43
42
54
61
19
17
51
60
12
14
47
15
8
58
9
82
9
44
53
54
7
11
106
10
106
56
62
88
110
1
76
111
78
77
117
106
75
77
108
5
120
107
22
119
4
3
95
118
113
35
66
21
90
89
40
44
36
37
86
87
85
116
64
66
70
38
39
108
68
25
24
33
115
32
91
69
106
107
72
50
96
73
93
29
66
92
28
94
114
45
27

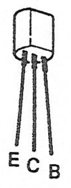
SCHEMATIC DIAGRAM



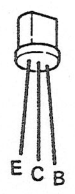
SW101	A, B	MW
	C, D	SW1
	E, F	SW2
	G, H	FM
	I, J	LOCAL/DIST
SW201 SW202		PLAY/RECORD (PLAY)
SW203	A	RADIO-TAPE (TAPE)
	B	SLEEP ON-OFF (OFF)
	C	RADIO-AUX (RADIO)
	D	STEREO-MONO (STEREO)
	E	WIDE-NORMAL (NORMAL)
SW204		BEAT CUT
SW401		DIAL LIGHT ON-OFF



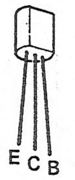
2SC509



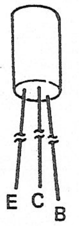
2SC732
2SC1959



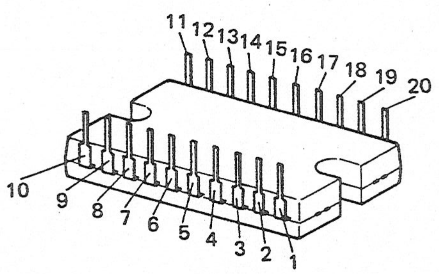
2SC1000
2SC1681



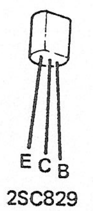
2SC828



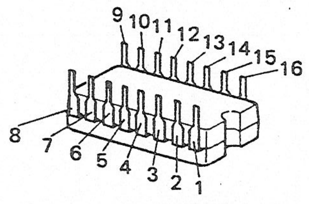
2SB619


11 12 13 14 15 16 17 18 19 20
10 9 8 7 6 5 4 3 2 1

TA7215P



2SC829
2SC1047
2SC1359


9 10 11 12 13 14 15 16
8 7 6 5 4 3 2 1

HA11227
HA11251

NOTE:

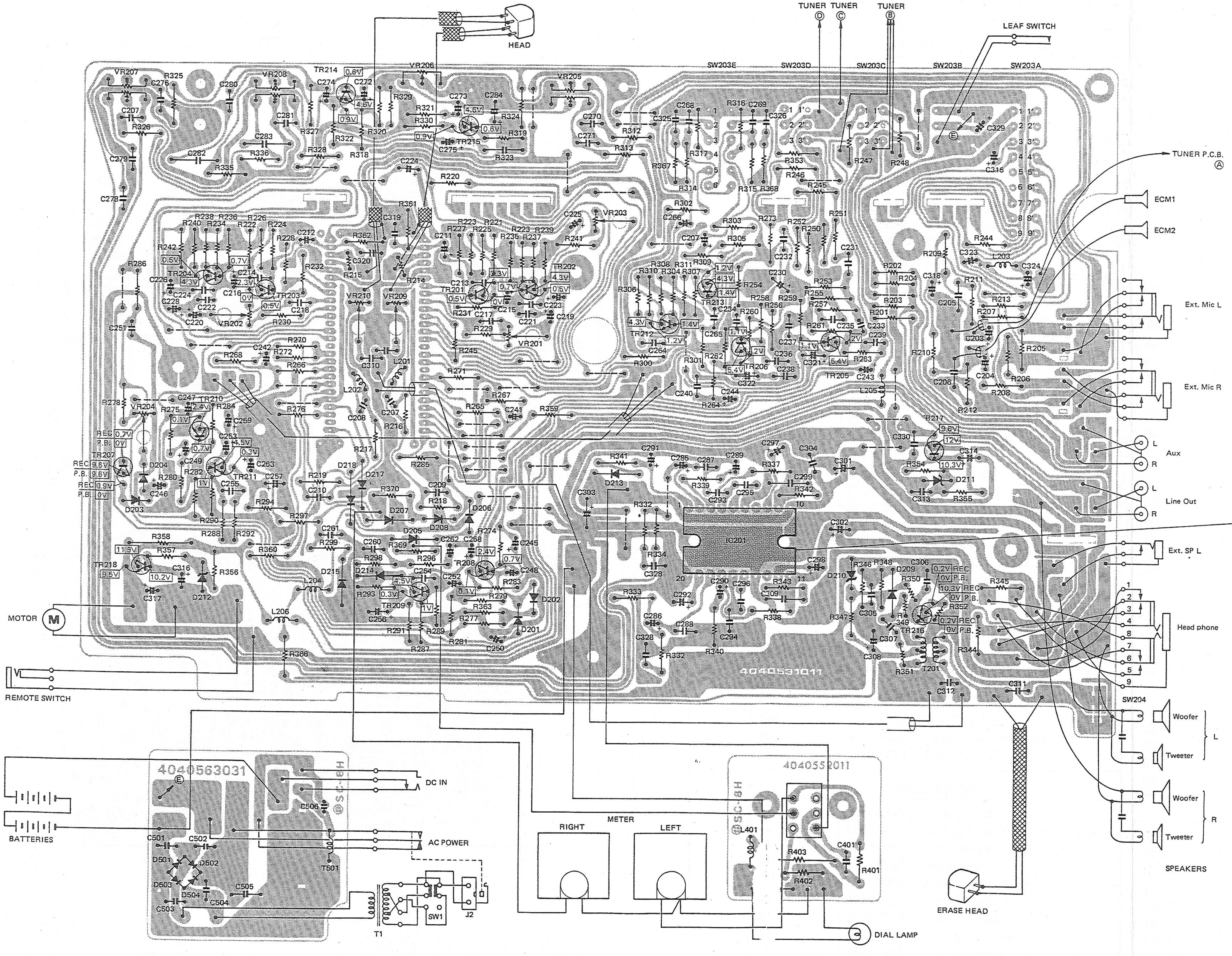
All resistance values are shown in ohms.

Except where noted by P all capacitance are shown in microfarads.

K = 1,000 M = 1,000,000 $P = \frac{1}{10^{12}}$

ELECTRICAL PARTS LOCATIONS

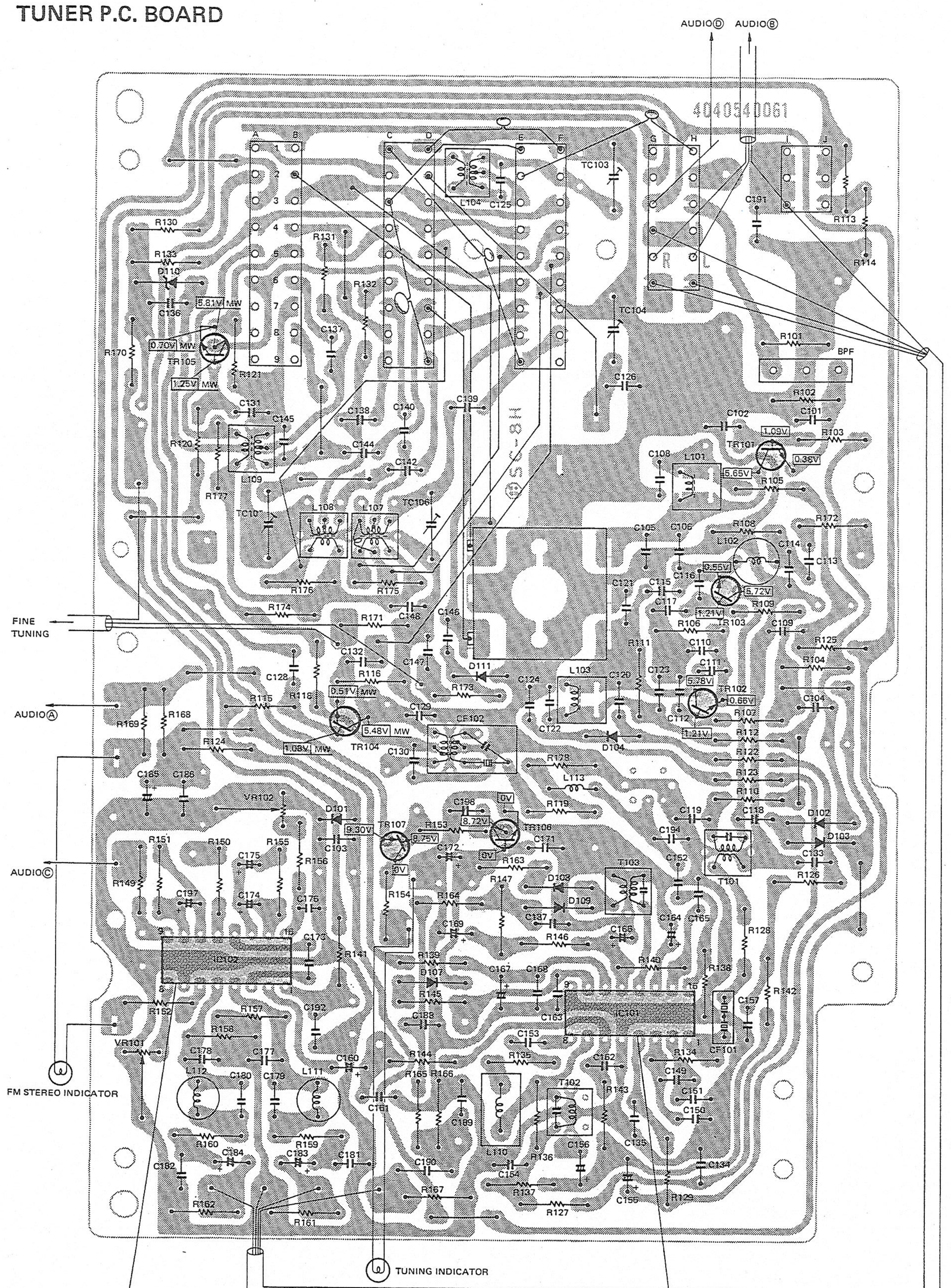
AUDIO/POWER SUPPLY/LAMP P.C. BOARD


HEAD
TUNER Ⓓ
TUNER Ⓒ
TUNER Ⓑ
LEAF SWITCH
SW203E
SW203D
SW203C
SW203B
SW203A
TUNER P.C.B. Ⓐ
ECM1
ECM2
Ext. Mic L
Ext. Mic R
L
R
Aux
Line Out
Ext. SP L
Head phone
SW204
Woofer
Tweeter
L
R
SPEAKERS
IC201
4040531011
MOTOR
M
REMOTE SWITCH
BATTERIES
4040563031
DC IN
AC POWER
T501
T1
SW1
J2
METER
RIGHT
LEFT
4040552011
L401
R403
R402
C401
R401
ERASE HEAD
DIAL LAMP

IC-201	1	2	3	4	5	6	7	8	9	10
	6V	6V	6V	0.7V	6.3V	0V	–	11.5V	6V	12V
	0V	11V	6V	6V	0.7V	6.3V	0V	–	11.5V	6V
	20	19	18	17	16	15	14	13	12	11

ELECTRICAL PARTS LOCATIONS

TUNER P.C. BOARD


AUDIOⒹ
AUDIOⒺ
4040540061
FINE TUNING
AUDIOⒶ
AUDIOⒸ
FM STEREO INDICATOR
TUNING INDICATOR
BPF
IC101
IC102
TR101
TR102
TR103
TR104
TR105
TR107
VR101
VR102
CF101
CF102
T101
T102
T103
TC103
TC104
TC105
TC106
L101
L102
L103
L104
L107
L108
L109
L110
L111
L112
L113
D101
D102
D103
D104
D107
D109
D110
D111
0.70V MW
1.25V MW
6.81V MW
0.57V MW
5.48V MW
1.08V MW
9.30V
8.72V
9.75V
1.09V
0.36V
5.65V
0.55V
5.72V
1.21V
5.78V
0.66V
1.21V
0V

	9	10	11	12	13	14	15	16
IC-102	0V	1.47V	1.47V	1.10V	1.47V	1.47V	1.47V	1.88V
	0.05V	0V	7.90V	1.21V	1.21V	1.80V	1.41V	6.98V
	8	7	6	5	4	3	2	1

	9	10	11	12	13	14	15	16	
IC-101	0V	0V	5.55V	0.95V	0V	3.00V	1.32V	0.71V	FM
	0V	0V	5.90V	0.97V	0V	3.27V	1.34V	0.72V	MW
	4.64V	3.39V	3.30V	0V	5.45V	3.25V	3.25V	3.25V	FM
	4.90V	3.64V	3.60V	0V	0.05V	0.50V	0.50V	0.50V	MW
	8	7	6	5	4	3	2	1	

PARTS LIST

Symbol No.	Part No.	Description
CABINET PARTS		
101	25817389	Front Cabinet Ass'y
103	25825238	Handle Ass'y
104	25825239	Handle
105	25825240	Handle Metal
106	25818208	Decoration built-in Microphone
107	25817390	Front Metal
108	25823271	Ring, Tweeter
109	25823272	Net, Tweeter
110	25823273	Net, Speaker
111	25771989	Spring, Cassette Up
112	25858433	Cushion, Speaker
113	22745092	Dial String
114A	25837222	Button – White. Stop, FF, REW
114B	25837223	Button – Red. Record
114C	25837224	Button – Blue. Pause
114D	25837267	Button – White. Play
115	25817391	Back Cabinet Ass'y
116	25838110	Battery Cover Ass'y
117	22124475	Rod Antenna
118	25844031	Base, Rod Antenna
119	25847207	Bracket, Rod Antenna
120	25865545	Sub Chassis
121	25827877	Dial Plate
122A	22742225	Dial Pulley A
122B	22742231	Dial Pulley B
122C	22742232	Dial Pulley C
123	22749231	Tuning Shaft
124	22742226	Dial Drum A
125	25771990	Spring, Dial Drum
126	25741286	Dial Pointer
127	25837225	Button, Lamp
128	22167856	Socket AC/DC
129	25838111	Cassette Cover Ass'y
130	25837226	Tuning Knob
131	25837227	Knob, Volume
132	25753331	Collar, Knob
133	25827878	Name Plate
134	22742224	Dial Drum B
135	25844030	Holder, Bar Antenna
137	25837220	Button, Push
MECHANISM		
3	25748340	Lever, Record Safety
4	25771991	Spring, Erase Protection Lever
5	25724806	Bar, Erase Protection Lever
8	25728160	Head Block
9	25771992	Spring, Head Bracket
10	25771993	Spring, Record
11	25753328	Bushing, Head Bracket
12	25772497	Spring, RP Head
14	25717408	Pinch Roller Ass'y

Symbol No.	Part No.	Description
15	25771994	Spring, Pinch Roller
17	25712361	Reel Ass'y, Take-up
19	25712362	Reel Ass'y, Supply
21	25725390	Clutch Ass'y, RF
22	25771995	Spring, Clutch Ass'y
24	22713488	FF Idler Arm Ass'y
25	25771996	Spring, Idler Arm Ass'y
26	25728161	Flywheel Holder Ass'y
28	25771997	Spring, Thrust
29	25725389	Flywheel Metal
32	25748343	Auto Stop Lever Ass'y
33	25771998	Spring, Auto Stop Lever
36	25771999	Spring, Main Plate
37	25748341	Rewind Lever
38	25748342	Slide Lever, Play
39	25753329	Bushing, Play Slide Lever
40	22195287	Leaf Switch
42	22707354	Cap Screw, 2 x 11
43	22707355	Screw Pan Head, 2 x 11
44 E-9907355	70432605	Screw Bind Head, 2.6 x 5
45	22701416	Screw Pan Head, 2.6 x ~~5~~ 18
47	25735232	E Ring, 2.5 ϕ
50	22703257	Washer, 3 x 4.3 x 0.4
51	22703257	Washer, 3 x 4.3 x 0.4
53	25873200	Counter
54	25755396	Counter Belt
58	25732330	Sensing Plate Ass'y
60	22217330	RP Head
61	22218207	Erase Head
62	25772498	Spring, Pack
64	22125757	Motor, EG510AD-TA
66	25755397	Main Belt
69	22751166	Motor Rubber
70	25758011	Motor Pulley
72	22707356	Coller Screw
73	25717409	Flywheel Capstan
75	25813489	Slide Lever, Eject
77	25753330	Bushing, Eject Lever
78	25772500	Spring, Eject Lever
83	22195288	Push Switch Ass'y
86	25713490	Lever, Pause
87	25772499	Spring, Pause Lever
94	25772502	Spring, Record Slide Lever
IC'S, TRANSISTORS & DIODES		
IC101	22114660	IC, HA11251
IC102	22114714	IC, HA11227
IC201	B0319640	IC, TA7215P
TR101	22114712	NPN, Transistor, 2SC1047B
TR102	22114713	NPN, Transistor, 2SC1359B
TR103	22114713	NPN, Transistor, 2SC1359B
TR104	22114411	NPN, Transistor, 2SC829B
TR105	22114202	NPN, Transistor, 2SC829C

Symbol No.	Part No.	Description
TR106	A6317560	NPN, Transistor, 2SC1815GR
TR107	A6534040	PNP, Transistor, 2SA1015Y
TR201	A6315940	NPN, Transistor, 2SC1681BL
TR202	A6315940	NPN, Transistor, 2SC1681BL
TR203	A6315940	NPN, Transistor, 2SC1681BL
TR204	A6315940	NPN, Transistor, 2SC1681BL
TR205	A6315940	NPN, Transistor, 2SC1681BL
TR206	A6315940	NPN, Transistor, 2SC1681BL
TR207	A6733220	NPN, Transistor, 2SC732GR
TR208	A6733220	NPN, Transistor, 2SC732GR
TR209	A6733220	NPN, Transistor, 2SC732GR
TR210	A6733220	NPN, Transistor, 2SC732GR
TR211	A6733220	NPN, Transistor, 2SC732GR
TR212	A6733280	NPN, Transistor, 2SC732BL
TR213	A6733280	NPN, Transistor, 2SC732BL
TR214	A6733220	NPN, Transistor, 2SC732GR
TR215	A6733220	NPN, Transistor, 2SC732GR
TR216	A6319340	NPN, Transistor, 2SC1959Y
TR217	A6717960	NPN, Transistor, 2SC509Y
TR218	A6717960	NPN, Transistor, 2SC509Y
D1	A8600080	Diode, TLR102KB
D2	A8600080	Diode, TLR102KB
D101	22115503	Diode, KB269
D102	22115303	Diode, 1N60P
D103	22115303	Diode, 1N60P
D104	22115237	Diode, 1S2139B
D107	22115303	Diode, 1N60P
D108	22115303	Diode, 1N60P
D109	22115303	Diode, 1N60P
D110	22115504	Diode, Zener Diode, HZ6C1
D111	22115237	Diode, 1S2139B
D201	22115451	Diode, 1S2076
D202	22115451	Diode, 1S1076
D203	22115451	Diode, 1S2076
D204	22115451	Diode, 1S2076
D205	22115303	Diode, 1N60P
D206	22115451	Diode, 1S2076
D207	22115303	Diode, 1N60P
D208	22115451	Diode, 1S2076
D209	22115303	Diode, 1N60P
D210	A7110021	Zener Diode, 05Z5.1L
D211	A7110303	Zener Diode, 05Z10U
D212	A7110303	Zener Diode, 05Z10U
D213	22115303	Diode, 1N60P
D214	22115303	Diode, 1N60P
D215	22115303	Diode, 1N60P
D216	22115303	Diode, 1N60P
D217	22115303	Diode, 1N60P
D218	22115303	Diode, 1N60P
D501	22115507	Diode, W02
COILS & TRANSFORMERS		
L101	22294375	Coil, RF, FM

Symbol No.	Part No.	Description
L102	22291106	Coil, Choke, FM
L103	22284042	Coil, Oscillator, FM
L104	22282187	Coil, Antenna, SW2
L105	22242188	Coil, Antenna, SW1, MW
L106	22242188	Coil, Antenna, SW1, MW
L107	22285284	Coil, Oscillator, SW2
L108	22285285	Coil, Oscillator, SW1
L109	22245342	Coil, Oscillator, MW
L110	22284038	Coil, 18μH
L111	22284039	Coil, 18mH
L112	22284039	Coil, 18mH
L113	22284043	Coil, 220μH
L201	22284041	Coil, 18mH
L202	22284041	Coil, 18mH
L203	22284043	Coil, 220μH
L204	22284043	Coil, 220μH
L205	22284043	Coil, 220μH
L206	22284043	Coil, 220μH
L401	22284043	Coil, 220μH
T1	22223267	Transformer, Power
T101	22265787	Transformer IF, FM
T102	22267366	Transformer IF, FM
T103	22264779	Transformer IF, AM
T201	22295090	Transformer, Bias Oscillator
T501	22211246	Transformer, Choke 1.5mH
ELECTRICAL PARTS		
SW1	22195286	Switch, Slide, Volt Change
SW101	22195281	Switch, Push, Band Select, Local-Distance
SW201	22195282	Switch, Slide, Play-Record
SW202	22195282	Switch, Slide, Play-Record
SW203	22195283	Switch, Push, Radio-Tape, Sleep ON-OFF, Radio-Aux, Stereo-Mono, Wide-Normal
SW204	22195284	Switch, Slide, Beat-Cut
SW401	22195285	Switch, Push, Dial light ON-OFF
J1	22167866	Jack Plate Ass'y a. Microphone b. Remote c. Aux in d. Line Out e. Ext Speaker f. Headphone
J2	22167856	Socket, AC, DC (Ext)
SP1	22152224	Speaker, Tweeter, 5cmφ, 4 ohm
SP2	22152224	Speaker, Tweeter, 5cmφ, 4 ohm
SP3	22152225	Speaker, Tweeter, 12cmφ, 4 ohm
SP4	22152225	Speaker, Tweeter, 12cmφ, 4 ohm
M1	22104480	Meter, Level
M2	22104480	Meter, Level, Battery
ECM1	22758124	Condenser Microphone

Symbol No.	Part No.	Description
ECM2	22758124	Condenser Microphone
CF101	22153093	Filter, Ceramic CFSG10.7
CF102	22153094	Filter, Ceramic CFZ455C
BPF	22153092	Filter, Band Pass
	22124475	Lod Antenna
	22113457	Lamp, Dial light

CAPACITORS

Capacity Torelance

C = ±0.25pF D = ±0.5pF J = ±5% K = ±10% M = ±20%

Temperature Characteristic

$YD = {}^{+20\%}_{-30\%}$ $YF = {}^{+30\%}_{-80\%}$

Temperature Coefficient

SL = +350 ~ 1000 ppm/oc NPO = 0 ppm/oc

N-2200 = −2200 ppm/oc

Symbol No.	Part No.	Description
C1	22478339	Electrolytic, None-Polarity, 3.3µF, 50V
C2	22478339	Electrolytic, None-Polarity, 3.3µF, 50V
C3	22342103	Ceramic 0.01µF, YF, Z
C101	22362150	Ceramic 15pF, SL, K
C102	22343103	Ceramic 0.01µF, YD, M
C103	22342473	Ceramic 0.047µF, YF, Z
C104	22343103	Ceramic 0.01µF, YD, M
C105	22362160	Ceramic 16pF, SL, K
C106	22361409	Ceramic 4pF, NPO, C
C108	22343103	Ceramic 0.01µF, YD, M
C109	22342103	Ceramic 0.01µF, YF, Z
C110	22361240	Ceramic 24pF, NPO, J
C111	22361120	Ceramic 12pF, NPO, J
C112	22343103	Ceramic 0.01µF, YD, M
C113	22343472	Ceramic 0.0047µH, YD, M
C114	22361391	Ceramic 390pF, SL, J
C115	22361509	Ceramic 5pF, NPO, C
C116	22361270	Ceramic 27pF, NPO, J
C117	22343103	Ceramic 0.01µF, YD, M
C118	22361609	Ceramic 6pF, NPO, C
C119	22343103	Ceramic 0.01µF, YD, M
C120	22361309	Ceramic 3pF, NPO, C
C121	22362100	Ceramic 10pF, N-470, K
C122	22343103	Ceramic 0.01µF, YD, M
C123	22343103	Ceramic 0.01µF, YD, M
C124	22343103	Ceramic 0.01µF, YD, M
C125	22361409	Ceramic 4pF, SL, D
C126	22361309	Ceramic 3pF, SL, D
C127	22361609	Ceramic 6pF, SL, D
C128	22342473	Ceramic 0.047µF, YF, Z
C129	22361300	Ceramic 30pF, NPO, J
C130	22342473	Ceramic 0.047µF, YF, Z
C131	22342473	Ceramic 0.047µF, YF, Z
C132	22342473	Ceramic 0.047µF, YF, Z
C133	22342473	Ceramic 0.047µF, YF, Z

Symbol No.	Part No.	Description
C134	22342473	Ceramic 0.047µF, YF, Z
C135	22342473	Ceramic 0.047µF, YF, Z
C136	22342473	Ceramic 0.047µF, YF, Z
C137	22372103	Mylar, 0.01µF, K
C138	22381332	Polystyrene 0.0033µF, J
C139	22381562	Polystyrene 0.0056µF, J
C140	22381152	Polystyrene 0.0015µF, J
C142	22381162	Polystyrene 0.0016µF, J
C144	22381331	Polystyrene 330pF, J
C145	22361409	Ceramic 4pF, N-4700, D
C146	22362100	Ceramic 10pF, N-4700, K
C147	22342473	Ceramic 0.047µF, YF, Z
C148	22342473	Ceramic 0.047µF, YF, Z
C149	22342473	Ceramic 0.047µF, YF, Z
C150	22342473	Ceramic 0.047µF, YF, Z
C151	22342473	Ceramic 0.047µF, YF, Z
C152	22342473	Ceramic 0.047µF, YF, Z
C153	22343103	Ceramic 0.01µF, YD, M
C154	22342473	Ceramic 0.047µF, YF, Z
C155	22448339	Electrolytic 3.3µF, 50V
C156	22443470	Electrolytic 47µF, 10V
C157	22342473	Ceramic 0.047µF, YF, Z
C160	22448339	Electrolytic 3.3µF, 50V
C161	22362121	Ceramic 120pF, SL, K
C162	22362121	Ceramic 120pF, SL, K
C163	22362471	Ceramic 470pF, SL, K
C164	22446479	Electrolytic 4.7µF, 25V
C165	22342473	Ceramic 0.047µF, YF, Z
C166	22448339	Electrolytic 3.3µF, 50V
C167	22443101	Electrolytic 100µF, 10V
C168	22342473	Ceramic 0.047µF, YF, Z
C169	22448339	Electrolytic 3.3µF, 50V
C171	22342473	Ceramic 0.047µF, YF, Z
C172	22446479	Electrolytic 4.7µF, 25V
C173	22371473	Mylar 0.047µF, J
C174	22468338	Electrolytic LL 0.33µF, 50V
C175	22468109	Electrolytic LL 1µF, 50V
C176	22381471	Polystyrene 470pF, J
C177	22371183	Mylar 0.018µF, J
C178	22371183	Mylar 0.018µF, J
C179	22371392	Mylar 0.0039µF, J
C180	22371392	Mylar 0.0039µF, J
C181	22381332	Polystyrene 0.0033µF, J
C182	22331332	Polystyrene 0.0033µF, J
C183	22448478	Electrolytic 0.47µF, 50V
C184	22448478	Electrolytic 0.47µF, 50V
C185	22443101	Electrolytic 100µF, 10V
C186	22342473	Ceramic 0.047µF, YF, Z
C187	22343103	Ceramic 0.01µF, YD, M
C188	22371103	Mylar 0.01µF, J
C189	22371103	Mylar 0.01µF, J
C190	22371393	Mylar 0.039µF, J
C191	22362101	Ceramic 100pF, SL, K

Symbol No.	Part No.	Description
C192	22342473	Ceramic 0.047µF, YF, Z
C193	22361209	Ceramic 2pF, SL, D
C194	22362820	Ceramic 82pF, SL, K
C195	22362560	Ceramic 56pF, SL, K
C196	22361371	Ceramic 370pF, SL, J
C197	22468229	Electrolytic LL 2.2µF, 50V
C198	22342473	Ceramic 0.047µF, YF, Z
C199	22361509	Ceramic 5pF, SL, D
C203	22468228	Electrolytic LL 0.22µF, 50V
C204	22468228	Electrolytic LL 0.22µF, 50V
C205	22342473	Ceramic 0.047µF, YF, Z
C206	22342473	Ceramic 0.047µF, YF, Z
C207	22381361	Polystyrene 360pF, J
C208	22381361	Polystyrene 360F, J
C209	22371102	Mylar 0.001µF, J
C210	22371102	Mylar 0.001µF, J
C211	22468228	Electrolytic LL 0.22µF, 50V
C212	22468228	Electrolytic LL 0.22µF, 50V
C213	22362101	Ceramic 100pF, SL, K
C214	22362101	Ceramic 100pF, SL, K
C215	22448478	Electrolytic 0.47µF, 50V
C216	22448478	Electrolytic 0.47µF, 50V
C217	22371103	Mylar 0.01µF, J
C218	22371103	Mylar 0.01µF, J
C219	22445100	Electrolytic 10µF, 16V
C220	22445100	Electrolytic 10µF, 16V
C223	22362101	Ceramic 100pF, SL, K
C224	22362101	Ceramic 100pF, SL, K
C225	22443100	Electrolytic 10µF, 16V
C226	22443100	Electrolytic 10µF, 16V
C227	22448478	Electrolytic 0.47µF, 50V
C228	22448478	Electrolytic 0.47µF, 50V
C229	22443471	Electrolytic 470µF, 10V
C230	22443471	Electrolytic 470µF, 10V
C231	22371223	Mylar 0.022µF, J
C232	22371223	Mylar 0.022µF, J
C233	22381561	Polystyrene 560pF, J
C234	22381561	Polystyrene 560pF, J
C235	22362101	Ceramic 100pF, SL, K
C236	22362101	Ceramic 100pF, SL, K
C237	22371102	Mylar 0.001µF, J
C238	22371102	Mylar 0.001µF, J
C239	22362221	Ceramic 220pF, SL, K
C240	22362221	Ceramic 220pF, SL, K
C241	22468109	Electrolytic LL 1µF, 50V
C242	22468109	Electrolytic LL 1µF, 50V
C243	22448478	Electrolytic 0.47µF, 50V
C244	22448478	Electrolytic 0.47µF, 50V
C245	22445100	Electrolytic 10µF, 16V
C246	22445100	Electrolytic 10µF, 16V
C247	22445100	Electrolytic 10µF, 16V
C248	22468228	Electrolytic LL 0.22µF, 50V
C249	22468228	Electrolytic LL 0.22µF, 50V

Symbol No.	Part No.	Description
C250	22445100	Electrolytic 10µF, 16V
C251	22443101	Electrolytic 100µF, 10V
C252	22448229	Electrolytic 2.2µF, 50V
C253	22448229	Electrolytic 2.2µF, 50V
C254	22362221	Ceramic 220pF, SL, K
C255	22362221	Ceramic 220pF, SL, K
C256	22442221	Electrolytic 220µF, 6.3V
C257	22442221	Electrolytic 220µF, 6.3V
C258	22448229	Electrolytic 2.2µF, 50V
C259	22448229	Electrolytic 2.2µF, 50V
C260	22371103	Mylar 0.01µF, J
C261	22371103	Mylar 0.01µF, J
C262	22448478	Electrolytic 0.47µF, 50V
C263	22448478	Electrolytic 0.47µF, 50V
C264	22371473	Mylar 0.047µF, J
C265	22371473	Mylar 0.047µF, J
C266	22448478	Electrolytic 0.47µF, 50V
C267	22448478	Electrolytic 0.47µF, 50V
C268	22371222	Mylar 0.0022µF, J
C269	22371222	Mylar 0.0022µF, J
C270	22371102	Mylar 0.001µF, J
C271	22371102	Mylar 0.001µF, J
C272	22448229	Electrolytic 2.2µF, 50V
C273	22448229	Electrolytic 2.2µF, 50V
C274	22448478	Electrolytic 0.47µF, 50V
C275	22448478	Electrolytic 0.47µF, 50V
C276	22371222	Mylar 0.0022µF, J
C277	22371222	Mylar 0.0022µF, J
C278	22371223	Mylar 0.022µF, J
C279	22371223	Mylar 0.022µF, J
C280	22371223	Mylar 0.022µF, J
C281	22371223	Mylar 0.022µF, J
C282	22371224	Mylar 0.22µF, J
C283	22371224	Mylar 0.22µF, J
C284	22443221	Electrolytic 220µF, 10V
C285	22448478	Electrolytic 0.47µF, 50V
C286	22448478	Electrolytic 0.47µF, 50V
C287	22362471	Ceramic 470pF, SL, K
C288	22362471	Ceramic 470pF, SL, K
C289	22443470	Electrolytic 47µF, 10V
C290	22443470	Electrolytic 47µF, 10V
C291	22443101	Electrolytic 100µF, 10V
C292	22443471	Electrolytic 470µF, 10V
C293	22362221	Ceramic 220pF, SL, K
C294	22362221	Ceramic 220pF, SL, K
C295	22362101	Ceramic 100pF, SL, K
C296	22362101	Ceramic 100pF, SL, K
C297	22443101	Electrolytic 100µF, 10V
C298	22443101	Electrolytic 100µF, 10V
C299	22372104	Mylar 0.1µF, K
C300	22372104	Mylar 0.1µF, K
C301	22443102	Electrolytic 1000µF, 10V
C302	22443102	Electrolytic 1000µF, 10V

Symbol No.	Part No.	Description
C303	22445222	Electrolytic 2200μF, 16V
C304	22432473	Ceramic 0.047μF, YF, Z
C305	22342473	Ceramic 0.047μF, YF, Z
C306	22362101	Ceramic 100pF, SL, K
C307	22342473	Ceramic 0.047μF, YF, Z
C308	22445221	Electrolytic 220μF, 16V
C309	22362101	Ceramic 100pF, SL, K
C310	22362101	Ceramic 100pF, SL, K
C311	22371822	Mylar 0.0082μF, J
C312	22381412	Polystyrene 0.0041μF, J
C313	22342473	Ceramic 0.047μF, YF, Z
C314	22443471	Electrolytic 470μF, 10V
C315	22445220	Electrolytic 22μF, 16V
C316	22443470	Electrolytic 47μF, 10V
C317	22445220	Electrolytic 22μF, 16V
C318	22443101	Electrolytic 100μF, 10V
C319	22372152	Mylar 0.0015μF, K
C320	22372152	Mylar 0.0015μF, K
C321	22448478	Electrolytic 0.47μF, 50V
C322	22448478	Electrolytic 0.47μF, 50V
C323	22445220	Electrolytic 22μF, 16V
C324	22445470	Electrolytic 47μF, 16V
C325	22371472	Mylar 0.0047μF, J
C326	22371472	Mylar 0.0047μF, J
C327	22371333	Mylar 0.033μF, J
C328	22371333	Mylar 0.033μF, J
C329	22445220	Electrolytic 22μF, 16V
C330	22342103	Ceramic 0.01μF, YF, Z
C401	22343103	Ceramic 0.01μF, YD, M
C501	22342223	Ceramic 0.022μF, YF, Z
C502	22342223	Ceramic 0.022μF, YF, Z
C503	22342223	Ceramic 0.022μF, YF, Z
C504	22342223	Ceramic 0.022μF, YF, Z
C505	22445102	Electrolytic 1000μF, 16V
C506	22445220	Electrolytic 22μF, 16V
VC101	22308173	Capacitor, Poly-Variable
TC101	22308173	Capacitor, Poly Variable
TC102	22308173	Capacitor, Poly Variable
TC103	22309160	Capacitor, Trimmer, 8pF
TC104	22309160	Capacitor, Trimmer, 8pF
TC105	22308173	Capacitor, Poly Variable
TC106	22309160	Capacitor, Trimmer, 8pF
TC107	22309160	Capacitor, Trimmer, 8pF
TC108	22308173	Capacitor, Poly Variable

RESISTORS

Symbol No.	Part No.	Description
R101	22555102	1K ohm
R102	22555331	330 ohm
R103	22555102	1K ohm
R104	22555223	22K ohm
R105	22555221	220 ohm
R106	22555821	820 ohm
R107	22555153	15K ohm
R108	22555681	680 ohm
R109	22555153	15K ohm
R110	22555221	220 ohm
R111	22555152	1.5K ohm
R112	22555151	150 ohm
R113	22555104	100K ohm
R114	22555101	100 ohm
R115	22555473	47K ohm
R116	22555102	1K ohm
R118	22555681	680 ohm
R119	22555102	1K ohm
R120	22555103	10K ohm
R121	22555561	560 ohm
R122	22555103	10K ohm
R123	22555104	100K ohm
R124	22555222	2.2K ohm
R125	22555561	560 ohm
R126	22555104	100K ohm
R127	22555104	100K ohm
R128	22555271	270 ohm
R129	22555181	180 ohm
R130	22555101	100 ohm
R131	22555470	47 ohm
R132	22555470	47 ohm
R133	22555101	100 ohm
R134	22555331	330 ohm
R135	22555271	270 ohm
R136	22555103	10K ohm
R137	22555223	22K ohm
R138	22555333	33K ohm
R139	22555151	150 ohm
R140	22555103	10K ohm
R141	22555470	47 ohm
R142	22555104	100K ohm
R143	22555272	2.7K ohm
R144	22555102	1K ohm
R145	22555104	100K ohm
R146	22555123	12K ohm
R147	22555153	15K ohm
R149	22555124	120K ohm
R150	22555104	100K ohm
R151	22555154	150K ohm
R152	22555221	220 ohm
R153	22555124	120K ohm
R154	22555561	560 ohm
R155	22555102	1K ohm
R156	22555223	22K ohm
R157	22555272	2.7K ohm
R158	22555272	2.7K ohm
R159	22555562	5.6K ohm
R160	22555562	5.6K ohm
R161	22555153	15K ohm
R162	22555153	15K ohm

Symbol No.	Part No.	Description
R163	22555822	8.2K ohm
R164	22555392	3.9K ohm
R165	22555392	3.9K ohm
R166	22555182	1.8K ohm
R167	22555183	18K ohm
R168	22555470	47 ohm
R169	22555271	270 ohm
R170	22555102	1K ohm
R171	22555102	1K ohm
R172	22555103	10K ohm
R173	22555104	100K ohm
R174	22555100	10 ohm
R175	22555332	3.3K ohm
R176	22555102	1K ohm
R177	22555102	1K ohm
R178	22555222	2.2K ohm
R201	22555823	82K ohm
R202	22555823	82K ohm
R203	22555183	18K ohm
R204	22555183	18K ohm
R205	22555102	1K ohm
R206	22555102	1K ohm
R207	22555222	2.2K ohm
R208	22555222	2.2K ohm
R209	22555222	2.2K ohm
R210	22555222	2.2K ohm
R211	22555222	2.2K ohm
R212	22555222	2.2K ohm
R213	22555472	4.7K ohm
R214	22555100	10 ohm
R215	22555100	10 ohm
R216	22555563	56K ohm
R217	22555563	56K ohm
R218	22555363	36K ohm
R219	22555363	36K ohm
R220	22555182	1.8K ohm
R221	22555154	150K ohm
R222	22555154	150K ohm
R223	22555105	1M ohm
R224	22555105	1M ohm
R225	22555334	330K ohm
R226	22555334	330K ohm
R227	22555151	150 ohm
R228	22555221	220 ohm
R229	22555274	270K ohm
R230	22555274	270K ohm
R231	22555822	8.2K ohm
R232	22555123	12K ohm
R233	22555155	1.5M ohm
R234	22555155	1.5M ohm
R235	22555334	330K ohm
R236	22555334	330K ohm
R237	22555682	6.8K ohm

Symbol No.	Part No.	Description
R238	22555682	6.8K ohm
R239	22555102	1K ohm
R240	22555102	1K ohm
R241	22555273	27K ohm
R242	22555823	82K ohm
R243	22555153	15K ohm
R244	22555153	15K ohm
R245	22555433	43K ohm
R246	22555433	43K ohm
R247	22555153	15K ohm
R248	22555153	15K ohm
R249	22555334	330K ohm
R250	22555334	330K ohm
R251	22555223	22K ohm
R252	22555223	22K ohm
R253	22555225	2.2M ohm
R254	22555225	2.2M ohm
R255	22555155	1.5M ohm
R256	22555155	1.5M ohm
R257	22555393	39K ohm
R258	22555393	39K ohm
R259	22555103	10K ohm
R260	22555103	10K ohm
R261	22555103	10K ohm
R262	22555103	10K ohm
R263	22555223	22K ohm
R264	22555223	22K ohm
R265	22555392	3.9K ohm
R266	22555392	3.9K ohm
R267	22555273	27K ohm
R268	22555273	27K ohm
R269	22555562	5.6K ohm
R270	22555562	5.6K ohm
R271	22555560	560 ohm
R272	22555560	560 ohm
R273	22555102	1K ohm
R274	22555102	1K ohm
R275	22555102	1K ohm
R276	22555101	100 ohm
R277	22555393	39K ohm
R278	22555393	39K ohm
R279	22555824	820K ohm
R280	22555824	820K ohm
R281	22555103	10K ohm
R282	22555103	10K ohm
R283	22555181	180 ohm
R284	22555181	180 ohm
R285	22555100	10 ohm
R286	22555102	1K ohm
R287	22555124	120K ohm
R288	22555124	120K ohm
R289	22555223	22K ohm
R290	22555223	22K ohm

Symbol No.	Part No.	Description
R291	22555561	560 ohm
R292	22555561	560 ohm
R293	22555330	33 ohm
R294	22555330	33 ohm
R295	22555100	10 ohm
R296	22555471	470 ohm
R297	22555471	470 ohm
R298	22555562	5.6K ohm
R299	22555562	5.6K ohm
R300	22555103	10K ohm
R301	22555103	10K ohm
R302	22555273	27K ohm
R303	22555273	27K ohm
R304	22555824	820K ohm
R305	22555824	820K ohm
R306	22555394	390K ohm
R307	22555394	390K ohm
R308	22555332	3.3K ohm
R309	22555332	3.3K ohm
R310	22555152	1.5K ohm
R311	22555152	1.5K ohm
R312	22555222	2.2K ohm
R313	22555222	2.2K ohm
R314	22555273	27K ohm
R315	22555273	27K ohm
R316	22555103	10K ohm
R317	22555103	10K ohm
R318	22555105	1M ohm
R319	22555105	1M ohm
R320	22555154	150K ohm
R321	22555154	150K ohm
R322	22555392	3.9K ohm
R323	22555392	3.9K ohm
R324	22555102	1K ohm
R325	22555222	2.2K ohm
R326	22555222	2.2K ohm
R327	22555273	27K ohm
R328	22555273	27K ohm
R329	22555101	100 ohm
R330	22555101	100 ohm
R331	22555332	3.3K ohm
R332	22555332	3.3K ohm
R333	22555822	8.2K ohm
R334	22555822	8.2K ohm
R335	22555222	2.2K ohm
R336	22555222	2.2K ohm
R337	22555183	18K ohm
R338	22555183	18K ohm
R339	22555151	150 ohm
R340	22555151	150 ohm
R341	22555100	10 ohm
R342	22555479	4.7 ohm
R343	22555479	4.7 ohm

Symbol No.	Part No.	Description
R344	22555560	560 ohm
R345	22555560	560 ohm
R346	22555103	10K ohm
R347	22555102	1K ohm
R348	22555223	22K ohm
R349	22555222	2.2K ohm
R350	22555153	15K ohm
R351	22555332	3.3K ohm
R352	22555479	4.7 ohm
R353	22555103	10K ohm
R354	22555101	100 ohm
R355	22555331	330 ohm
R356	22555331	330 ohm
R357	22555101	100 ohm
R358	22598101	100 ohm, 1W
R359	22555222	2.2K ohm
R360	22555222	2.2K ohm
R361	22555224	220K ohm
R362	22555224	220K ohm
R363	22555471	470 ohm
R364	22555152	1.5K ohm
R365	22555152	1.5K ohm
R366	22555100	10 ohm
R367	22555273	27K ohm
R368	22555273	27K ohm
R369	22555122	1.2K ohm
R370	22555122	1.2K ohm
R401	22555683	68K ohm
R402	22555122	1.2K ohm
R403	22598560	56 ohm, 1W
VR101	22658478	Semi-fixed Variable, 200 ohm
VR102	22658477	Semi-fixed Variable, 10K ohm
VR103	22622413	Variable, Fine Tuning, 5K ohm
VR201	22658479	Semi-fixed Variable, 20K ohm
VR202	22658479	Semi-fixed Variable, 20K ohm
VR203	22658480	Semi-fixed Variable, 50K ohm
VR204	22658481	Semi-fixed Variable, 1K ohm
VR205	22622414	Variable Volume, 50K ohm
VR206	22629400	Variable Balance, 100K ohm
VR207	22621410	Variable Treble & Bass, 100K ohm
VR208	22621410	Variable Treble & Bass, 100K ohm
VR209	22658482	Semi-fixed Variable, 100K ohm
VR210	22658482	Semi-fixed Variable, 100K ohm
ACCESSORIES		
	27176584	Power Cord,AC
	20951265	Owners Manual

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MANUFACTURED BY
TOSHIBA CORPORATION
2-1, GINZA, 5-CHOME CHUO-KU, TOKYO 104, JAPAN

PRINTED IN JAPAN EA954005 OCT. 1978